REPORT RESUMES

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CURRICULAR NEEDS OF NORTH BAY SCHOOLS, A STUDY OF OPINIONS CONCERNING CURRICULAR NEEDS IN THE NORTH BAY COUNTIES OF MARIN, NAPA, SONOMA AND SOLANO.
BY- KASE, DONALD
NORTH BAY PACE CENTER, NAPA, CALIF.
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DESCRIPTORS- *STUDENT NEEDS, *CURRICULUM EVALUATION, *BEHAVIORAL OBJECTIVES, *EDUCATIONAL NEEDS, QUESTIONNAIRES, PARENT ATTITUDES, TEACHER ATTITUDES, STUDENT ATTITUDES, ADMINISTRATOR ATTITUDES, *EDUCATIONAL ATTITUDES, GRADE 6, GRADE 9, GRADE 12, CALIFORNIA, TAXONOMY OF EDUCATIONAL OBJECTIVES,

THE OBJECTIVES OF THE PROJECT WERE TO IDENTIFY EDUCATIONAL AND CULTURAL NEEDS OF STUDENTS AND TO ESTABLISH PRIORITIES AMONG THESE NEEDS. IN AUGUST 1966, QUESTIONNAIRES RETURNED BY 90 SCHOOL ADMINISTRATORS IDENTIFIED FIVE BROAD AREAS OF IMPORTANT STUDENT NEEDS. THE TWO MOST OFTEN MENTIONED, CURRICULUM METHODS AND CURRICULUM CONTENT, WERE STUDIED. STUDENT BEHAVIORAL OBJECTIVES FOR THE 11 LEVELS INDICATED IN THE "TAXONOMY OF EDUCATIONAL OBJECTIVES, HANDBOOKS I AND II" WERE DETERMINED FOR EACH OF 20 COMMON SUBJECT AREAS. A 117-ITEM QUESTIONNAIRE DESIGNED TO ALLOW COMPARISON OF RESPONDENT PERCEPTIONS OF CURRENT EDUCATIONAL PRACTICES WITH THEIR EXPECTATIONS WAS COMPLETED BY A 5 PERCENT SAMPLE OF INTACT CLASSROOMS IN GRADES 6, 9, AND 12, PARENTS OF THESE STUDENTS, TEACHERS, AND ADMINISTRATORS. FROM THESE 2,220 USABLE QUESTIONNAIRES, FINDINGS INDICATED (1) VOCATIONAL EDUCATION, SOCIAL STUDIES, AND HOME ECONOMICS WERE THE MOST KEENLY FELT CURRICULAR NEEDS OF STUDENTS, (2) PHYSICAL EDUCATION, FOREIGN LANGUAGE, AND MUSIC WERE THE MOST SATISFACTORILY ACHIEVED LEARNING GOALS, (3) EMOTIONAL COMPONENTS OF LEARNING IN ALL SUBJECTS WERE NEEDED MORE THAN ADDITIONAL STRESS ON PURELY INTELLECTUAL LEARNING, (4) AS STUDENTS PROGRESSED THROUGH SCHOOL, THEIR OPINIONS REGARDING A NEED FOR VOCATIONAL EDUCATION, SOCIAL STUDIES, AND HOME ECONOMICS INCREASED IN STRENGTH, (5) THE ABILITY TO MAKE AND REVISE JUDGMENTS ON THE BASIS OF A CONSISTENT PHILOSOPHY OF LIFE WAS VIEWED AS IMPORTANT IN ALL SUBJECT AREAS, AND (6) THE NEED FOR INCREASED EMPHASIS ON SYNTHESIZING AND EVALUATING KNOWLEDGE INCREASED WITH GRADE LEVEL. THE QUESTIONNAIRE AND STATISTICAL ANALYSES ARE INCLUDED. (EM)

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CURRICULAR NEEDS OF NORTH BAY SCHOOLS

(Curricular Need Study #1)

A Study of Opinions Concerning Curricular Needs in the North Bay Counties of Marin, Napa, Sonoma and Solano

Conducted by the
North Bay PACE Center
2 ~~Mr.~~ Donald Kase, Research Associate

Napa, California
September 1, 1967

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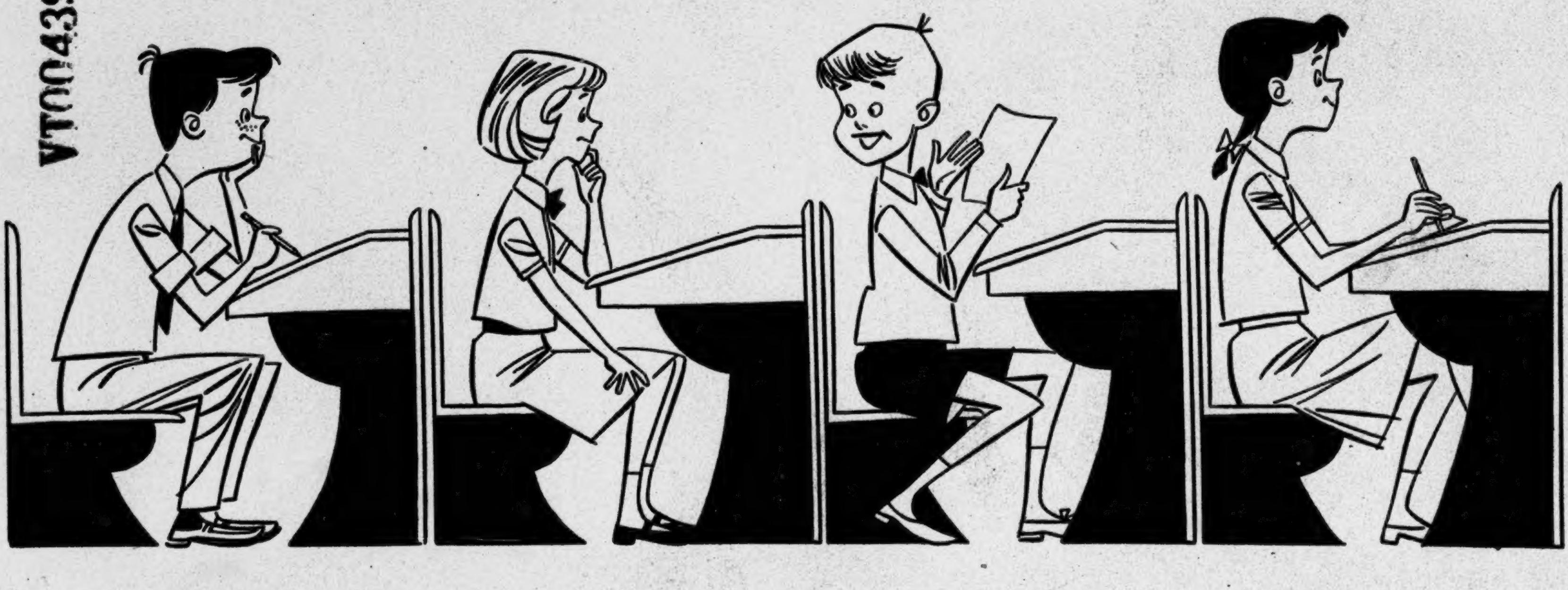

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Both educators and students are continuously assailed by requests to assist others in education as well as in other disciplines, by providing them with information, or by direct participation in a study of one kind or another. The staff of the PACE Center, and the Superintendents of Marin, Solano, Sonoma, and Napa Counties, are most appreciative of the extra time and extra effort of the many educators and students who have made this study possible. Their efforts should have a direct and "felt" impact on future educational programs.

Special thanks are due Mr. Bruce Wainwright, Research Consultant in the Office of the Napa County Superintendent of Schools, for his technical assistance in the design of the questionnaire and in providing editorial assistance on the Learning Goals.

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Members of the Marin, Solano, Sonoma, and Napa advisory committees to the PACE Center played a key role in collecting questionnaires from the parent sample. The Center is most grateful for their active assistance and participation in this regard.

Dr. Ralph Tyler, Director, Center for Advanced Study in the Behavioral Sciences, gave freely of his time to critically review theoretical assumptions underlying this study, as well as the basic methodology. The Center is grateful for his encouraging and helpful comments.

Construction of the Learning Goals and selected technical considerations of this study were cooperatively developed with Mr. Paul Preising, Director of Research, Supplementary Educational Center, 1110 North Tenth Street, San Jose, California 95112.

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PREFACE

The logical place to start improving education is with the identification and analysis of problems or needs. The establishment of justifiable priority for this work is possible only if the search for needs encompasses a wide spectrum of the educational scene.

There are many types of educational needs, e.g., pupil needs, teacher needs, needs of society, curricular needs, and institutional needs. All of these are interrelated. Based on the findings of a preliminary survey a decision was made for the North Bay PACE Center to concentrate on an examination of curricular needs during 1966-67: more specifically, to study the difference of opinions between what students and adults think should be, as compared with their perception of what actually is.

This document reports the development, conduct, findings, and some implications of that study for the four county North Bay area.

The work was conducted under the general direction of the then Project Director, Dr. Penrod Moss, assisted by the PACE Center staff. Technical development of the survey, and analysis and reporting of the data has been prepared by Mr. Donald Kase, Research Associate on the PACE staff.

It is hoped that the information reported herein will not only assist in the identification of needs to aid in the development of successful Title III Projects, but will also be of help to school districts in their ongoing program of curriculum development.

Nelson C. Price

Nelson C. Price
Director
North Bay PACE Center

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INTRODUCTION

This report is a presentation of the results of activities of the PACE Center during the first year of its operation in the interest of achieving two of the specific objectives described in the contract between the U. S. Office of Education and the Office of the Napa County Superintendent of Schools.

These two objectives are: (1) to identify educational and cultural needs of the 165,000 public and non-public preschool, elementary and secondary students residing in Napa, Marin, Solano and Sonoma counties -- the North Bay Region, and (2) to establish priorities among these needs for purposes of program development in school districts within the region.

The contract with the U. S. Office of Education also calls for two highly interrelated strategies for achieving these objectives. For the first objective the basic strategy is to conduct need studies in the manner of the behavioral sciences, i.e., use of the scientific method. This strategy should be augmented with other, more subjective, activities for identifying student needs, especially those of the various advisory committees.

The second objective of the Center calls for the use of an advisory-executive structure for setting priorities on identified needs. The intent of the contract is that teachers, students, parents, businessmen, skilled and unskilled workers, the clergy, artists, school administrators and others, should actively participate in the affairs of the Center. One of the critical activities of the advisory committees is to recommend to

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the Executive Board priorities for action. This is in addition to their active participation in identifying student needs, identifying local resources, assisting with increasing an awareness of developing educational events, and becoming involved in creative program development.

It should be pointed out that those two objectives, together with the strategies for attaining them, are also objectives and strategies of the other twenty PACE centers covering the 58 counties in California, all of which centers are funded under ESEA, Title III.[1]

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[1] Progress toward the attainment of the remaining primary objectives of the PACE Center will be reported to the Board under separate cover. These objectives are: (1) to identify regional resources that might be used to facilitate the fulfillment of high priority needs identified by the Center and the various advisory committees and set by the Executive Board, (2) to develop and/or facilitate developing educational programs designed specifcally to fulfill high priority needs, and (3) to disseminate information regarding activities of the Center, new programs, ideas, and developments in education. Implied in this last objective is that the Center, as an agent of the intermediate unit, should assist with the spread, or adoption of fully functional programs that are exemplary or innovative in nature.

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SUMMARY OF MOST SIGNIFICANT FINDINGS

1. Vocational Education, Social Studies, and Home Economics, as measured by the Learning Goals in the questionnaire, are the three most keenly felt curricular needs of students in the North Bay Region.

2. Physical Education, Foreign Language, and Music are Learning Goals that are viewed as being achieved to a more satisfactory degree in relation to other curricular areas.

3. Emotional (Affective) components of learning are felt to be more earnestly needed in the students' education than additional stress on purely intellectual (Cognitive) learning. This is true for nearly all curriculum areas.

4. As students progress through school, their opinions regarding a need for Vocational Education, Social Studies, and Home Economics increase in strength. This is true for both the intellectual and emotional components of these curriculum areas.

5. Both students and adults generally tend to feel quite satisfied with the overall job the schools are doing.

6. Ability to make and revise judgments on the basis of a consistent philosophy of life was viewed by almost every group of respondents as either the most needed, or second most needed Learning Goal of the Affective domain for almost every curriculum area.

7. A need was expressed for increased emphasis on the intellectual activities of synthesizing and evaluating knowledge (the two highest Cognitive levels studied). Again, the feeling for this need increases with increasing grade levels.

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An objective study of educational needs is a technical undertaking. It is at times hard to explain. Despite this, the PACE staff has in this report, tried to be accurate and comprehensive, and still brief and understandable.

The next several pages tell why and how the study was made. If you are interested in rationale and methodology, pages 3 through 14 are important.

If you are interested simply in the results, turn to page 15.

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HOW THIS STUDY OF CURRICULAR NEEDS CAME ABOUT

The North Bay PACE Center began operation in July, 1966. During the month of August, 1966, a questionnaire (See Appendix A) was sent to 250 public and non-public school administrators asking them to list the three most important student needs from their points of view.

Of these questionnaires, 36% were returned within a short period. The responses were then coded and tabulated. The Director reported to the Board on October 13, 1966, the results of these tabulations (See Appendix B). Five of the needs most frequently mentioned were adopted by the Executive Board for further study and programmatic development. These are, in order of frequency of mention:

1. Curriculum Methods.
2. Curriculum Content.
3. Library and Audiovisual equipment.
4. Preschool Education.
5. Recreation.

Since the first two most frequently mentioned needs were both concerned with curriculum, the decision was made to study in some depth needs of students in terms of curricular objectives. The results of this Administrator Survey were also taken as a direction for other future investigation. Ideally, this direction should have been further substantiated by the four county advisory committees as well. However, immediate action was imperative because of approaching deadlines for project submission and the Center could not wait for the developing advisory committees to become viable with respect to this responsibility.

Several method and technique problems were considered for assessing curricular needs. One central problem to consider was that of sampling:

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What curricular areas should be identified and sampled and to what extent? What groups of persons and how many in each group should be sampled? What demographic variables (school districts, wealth, population density, etc.) should be considered, and how should the sample be drawn?

Another critical issue was that of deciding what instruments to use for determining need. Should the Center use already developed questionnaires, if any were available? Should questionnaires be used at all, or should use be made of published criticisms of gaps in the curriculum? Should one technique be used for selected "target" groups (e.g., have anthropologists and/or sociologists interview low income and minority groups) and another technique for other target groups (e.g., use Q-Sort technique, semantic differential, or open-ended interviews on selected students and teachers)? Should the Center develop its own instruments designed specifically to measure an operational definition of "need"? Would such an instrument obtain identical measures on all persons in several samples, and would it have high communication value to both lay persons and educators?

The latter course of action was selected for several reasons. No existing available techniques appropriate to the problem were located. It was felt necessary to measure directly a clearly defined concept of student curricular needs. In addition, techniques that are understandable to lay people were considered an essential ingredient if the results of the study were to have impact for program development through the advisory structure of the Center. Also important among these reasons was an Executive Board decision not to use outside anthropologists and sociologists for this study during the 1966-67 school year.

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PROCEDURES

Definition of a Curriculum "Need"

One of the first tasks was to define "need". The chosen definition was: "Need is a measured discrepancy between opinion of the extent of respondent EXPECTATIONS (what should be) of the curriculum and opinion regarding the extent to which these expectations ARE BEING FULFILLED. (what is).[1] All of the PACE centers in California have struggled with the problem of defining "need" in such a way that its meaning is clear, both to lay persons in the advisory committees and to professional educators. It is extremely difficult to obtain agreement on the meaning of words that have value connotations, or which have an emotional charge, unless they are defined in terms of an activity that can be observed and described accurately by others. Words defined in this manner are termed "operational" definitions and are used extensively in the behavioral and physical sciences.

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[1] The formal mathematical model is: $N = E(e - o) = 0$. That is, Need equals the Expectation that the difference between the expected and the observed "reality" is zero. This is the null hypothesis. Thus, average positively signed differences between "e" and "o" for any one group of respondents is interpreted as a "need", whereas negatively signed differences are taken as excessive emphasis in that part of the curriculum. Zero discrepancies imply satisfaction - no need, and no excess. The maximum possible positive discrepancy is +3, and the maximum negative discrepancy is -3. There are four possible ratings of "what is" and four ratings of "what should be". For example, if a respondent rates a curriculum Learning Goal as existing to the extent "2", but believes it should exist to the extent "4", his score is +2. These scores are averaged for each curriculum area for each group of respondents and are labeled throughout the remainder of this report as $\bar{D}$, meaning average discrepancy. $\bar{\bar{D}}$ refers to an average of several $\bar{D}$'s.

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Questionnaire Construction

Once this operational definition of curriculum "need" was established, the next task was to construct an instrument to measure the discrepancies between opinions about what is expected from the schools with respect to the curriculum, and opinions about what seems to be actually happening.[1]

The first step in the scientific method is to state an objective in measurable terms. Similarly, the first step in system analysis, as applied to education, is to describe educational objectives in terms of measurable behavior - knowing, doing, feeling. After exploring alternative approaches to this first step, the staff decided to work within the structure of the eleven standard curriculum areas in California schools. Three of these curriculum areas (Language Arts, Social Studies, and Art) were further subdivided into more specific subject areas as shown on the following page.

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[1] A third variable planned for study was that of "actual" reality, viz., to what extent in fact are these various curriculum areas being taught or offered to students measured by this questionnaire. The plan was to see in what manner, if any, the measured opinion discrepancies correlated with the ongoing curricular reality in those school districts included in the sample. Regrettably, limited time, resources, and personnel did not allow this portion of the study to be conducted during 1966-67.

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CURRICULUM & SUBJECT AREAS OF QUESTIONNAIRE LEARNING GOALS

11 Curriculum Areas	20 Subject Areas
Mathematics	Mathematics
Language Arts	Reading Spelling Writing Speaking Grammar
Social Studies	History Civics Geography Economics
Science	Science
Art	Fine Art Applied Art Plastic Art
Music	Music
Vocational Education	Vocational Education
Home Economics	Home Economics
Foreign Language	Foreign Language
Health Education	Health Education
Physical Education	Physical Education

Several student behavioral objectives, or, as they were labeled "Learning Goals", were written by the staff for each of the 20 subject areas using Bloom's Taxonomy of Educational Objectives as a theoretical guide.[1,2]

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[1] Bloom, Benjamin S. (Ed.) Taxonomy of Educational Objectives, Handbook I: Cognitive Domain. New York: David McKay, 1956.

[2] Kratwohl, David R., Benjamin S. Bloom, and Bertram B. Masia. Taxonomy of Educational Objectives, Handbook II: Affective Domain. New York: David McKay, 1964.

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A "taxonomy" is a classification system. Bloom's Taxonomy of Educational Objectives is described in some detail in Appendix G. These objectives are stated in terms of student behavior. This behavior is classified into three types: "Cognitive", or knowing, "Affective", or feeling, and "Psycho-motor", or doing. For purposes of this study, only the Cognitive and Affective types of behavior are being studied.

Cognitive behavior according to Bloom has six levels of increasing complexity. These are:

Level	Behavior
1.	Knowing knowledge and information.
2.	Understanding knowledge and information.
3.	Applying knowledge and information.
4.	Analysis of knowledge and information.
5.	Synthesis of knowledge and information.
6.	Evaluation of knowledge and information.

Affective behavior has five levels of increasingly complex functioning. These are:

Level	Behavior
1.	Receiving.
2.	Responding to.
3.	Valuing.
4.	Organizing value systems.
5.	Behaving in accordance with a value system.

In this report the "levels" refer to those cited above.

Each of the questions on the questionnaire was written specifically to measure one of these eleven "levels" in the taxonomy. Thus, not only is each curriculum area measured, but also measured is the intellectual (Cognitive) "level" and its associated emotional (Affective) "level" of maturity for each area of the curriculum. A behavioral objective (or Learning Goal) becomes a need if it has not been attained to the degree considered desirable by the respondent group.

The next step in constructing the questionnaire was to determine the technique for measuring discrepancies consistent with our established definition of "need". Since opinion was being assessed, a four-point scale was developed for measuring the extent to which respondents believed Learning Goals are being attained in the schools. The same scale was used to evaluate respondent opinion with respect to the extent they believed these goals should be attained. Thus, the discrepancy between what "should be" and "what is" is measured by the numerical difference between the two opinions on a four point scale (see footnote, page 5).

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PILOT STUDY

One hundred and twenty items or Learning Goals were assembled into a trial format. This preliminary questionnaire was then reviewed by Dr. Ralph Tyler, Director, National Assessment Program, Stanford University. His comments and criticisms were supportive of the Learning Goal concept, and of the kind of assessment technique that was being developed. The trial questionnaire was then administered to three classes of sixth graders in three different counties. As a result of this pilot study, about half of the questions were revised. Sixth graders were used for this purpose because it was known that they were very likely to point out unwarranted assumptions which the staff might be making when writing the Learning Goals. Since the questionnaire was to be administered to respondents with a wide range of reading ability, it was necessary to write items at the lowest expected reading level. In the judgment of the staff this also was the sixth grade. In the final form 117 Learning Goals were used. (See Appendix H for a copy of this questionnaire.)

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SAMPLING

A grid was constructed taking into account population density in terms of geographic distribution, ADA, and the income level of parents in the various school districts. Each of the public and non-public school districts was placed in this grid. A five percent sample of intact classrooms for grades 6, 9, and 12 was selected in each cell in the grid. In some instances this procedure of taking intact classes resulted in more than a five percent sample and in others less than five percent. Overall, a total of 4.2% (or 2,220) of the approximately 41,000 students in these grades completed useable questionnaires.[1]

The adult sample was obtained by having teachers, administrators, and parents of the participating students also fill out the questionnaire. Special service personnel were mainly county office and district pupil personnel staff, and library and curriculum personnel. In addition, other interested adults were asked to complete the questionnaire, especially members of the county advisory committees. These latter groups obtained many additional questionnaires from parents and teachers on an informal basis.

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[1] Nearly 400 questionnaires had to be discarded as incomplete. No systematic bias was noted in the discarded questionnaires.

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INSTRUMENT ADMINISTRATION

Each of the four planning associates on the PACE staff made arrangements for administering and collecting the questionnaires in conformity with the sampling plan for his county. Approximately 2,000 of the 2,220 successfully completed questionnaires were administered directly by the staff. The questionnaire responses were then keypunched onto IBM cards, which were then placed on tape for analysis at the University of California Computer Center. This was accomplished through a special arrangement between the PACE Center, the Sonoma County Office Data Processing Center, and the University.

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RELIABILITY

Consistency (reliability) of respondent opinion among the several Learning Goals is of great importance, for consistency lends credibility to the results. Table I on the following page shows this questionnaire as having a high degree of consistency because the reliability coefficients are uniformly high.

It is interesting to note that for each respondent group shown in this table the reliability coefficients[1] are slightly lower for the Affective domain than for the Cognitive domain. This means findings regarding the emotional components of the curriculum are a little less consistent than the intellectual components. The difference, however, is of minor importance insofar as the main conclusions drawn from this study are concerned.

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[1] The technique used to compute these coefficients is known as the "odd-even split half technique". That is, one half of the items on the questionnaire were correlated with the remaining half. The resulting correlation coefficients are then "corrected" by the Spearman-Brown Prophecy formula shown at the bottom of the table. See Garrett, H. E., Statistics in Psychology and Education, 5th Ed., Longmans, Green & Co., New York, 1958, p. 339.

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TABLE I

Spearman-Brown
Reliability Coefficients

Description	Correlation r_{12}	N	Spearman-Brown Correction $r_{(1+2)}$*
Total Sample			
All Learning Goals	.908	1618	.952
Cognitive Learning Goals Only	.893	1796	.943
Affective Learning Goals Only	.764	1731	.866
Grade 9			
All Learning Goals	.905	441	.950
Cognitive Learning Goals Only	.872	497	.932
Affective Learning Goals Only	.763	478	.866
Grade 12			
All Learning Goals	.929	533	.963
Cognitive Learning Goals Only	.938	580	.968
Affective Learning Goals Only	.759	570	.863
Teachers			
All Learning Goals	.896	76	.945
Cognitive Learning Goals Only	.891	79	.942
Affective Learning Goals Only	.757	81	.862
Parents Plus Businessmen			
All Learning Goals	.929	105	.963
Cognitive Learning Goals Only	.913	109	.955
Affective Learning Goals Only	.776	107	.874
Administrators Plus Special Service Personnel			
All Learning Goals	.910	113	.953
Cognitive Learning Goals Only	.895	118	.945
Affective Learning Goals Only	.774	117	.873

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* $r_{(1+2)} = \dfrac{2r_{12}}{1+r_{12}}$

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RESULTS

It is hoped that you have read the "why" and "how" of this study. However, whether or not you did you may wish to analyze the results. These technical results, or findings, are reported in the next several pages in sufficient detail to allow an independent and critical evaluation of the conclusions by those readers who desire to do so. The major findings are summarized on page 1.

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GROSS FINDINGS FOR THE TOTAL SAMPLE

A total of 2,220 questionnaires obtained from the several respondent groups were analyzed. Combining all 2,220 questionnaires yields the tabulations shown in Table II on the following page. The most general finding based on this table is that in the opinion of the respondents completing the questionnaire, Vocational Education, Social Studies, and Home Economics, as measured by the Learning Goals in this study, are the three most keenly felt curricular needs of students in the North Bay Region. Vocational Education was rated as the greatest need in both the Cognitive (knowing) and Affective (feeling) domains of learning. By contrast, Physical Education, Foreign Language, and Music are Learning Goals that are viewed as being already achieved to a more satisfactory degree in relation to all other curricular areas studied. Math, Art, Language Arts, Science and Health Education fall between the three highest and three lowest ranked discrepancies of the eleven curricular areas.

Overall, this average discrepancy between "what is" and "what should be" is slightly greater in the Affective domain than in the Cognitive domain, indicating that emotional components of learning are felt to be more earnestly needed in the students' education than additional stress on purely intellectual learning. Almost without exception, this is consistent for each of the eleven curricular areas. Exceptions are found in Science and Home Economics, where Cognitive learning is viewed as slightly more needed than Affective learning.

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TABLE II

Average Discrepancies ($\bar{\bar{D}}$) And Their Relative Rankings (R) of 2,220 Respondents for Each of Eleven Curriculum Areas in the Cognitive and Affective Domains

	Bloom's Taxonomy				Average of Cognitive & Affective	
	Cognitive Domain		Affective Domain			
	$\bar{\bar{D}}$	Rank	$\bar{\bar{D}}$	Rank	$\bar{\bar{D}}$	Rank
Vocational Education	.783*	11	.919	11	.851	11
Social Studies	.692	9	.778	10	.735	10
Home Economics	.714	10	.666	8.5	.690	9
Health Education	.635	7	.644	7	.640	8
Science	.648	8	.597	6	.623	7
Language Arts	.560	6	.666	8.5	.613	6
Art	.552	5	.567	4	.560	5
Mathematics	.529	4	.585	5	.557	4
Music	.439	2	.563	2	.501	3
Foreign Language	.422	1	.564	3	.493	2
Physical Education	.448	3	.518	1	.483	1
Grand Means $\bar{\bar{D}}$ =	.584		.642		.614	

* See footnote on Page 5 explaining $\bar{D}$ and $\bar{\bar{D}}$.

Note: The larger the $\bar{\bar{D}}$ (average discrepancy) the greater is the felt need. The lower the number in the Rank Column the less the evidence of felt need.

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DETAILED FINDINGS

The following pages now go into more detail in analyzing the major findings as they apply to different respondent groups and to the various sections of the taxonomy of educational objectives.[1]

These specific details assume importance in the development of actual programs aimed at meeting the needs previously identified and reported.

Table IIa (Appendix C) and Table IIb (Appendix D) show the mean discrepancies ($\overline{D}$) and their relative rankings (R) for each curriculum area broken down by the various respondent groups. The respondent groups are 6th, 9th, and 12th graders, junior college students, teachers, parents, school administrators, special services personnel, and businessmen. All of these respondent groups were reclassified in several ways, as shown in the tables. These additional breakdowns include sex, county of residence, type of school, population density, and a measure of attitude toward schools in general.

Cognitive Needs

Table IIa shows an overall discrepancy in the Cognitive domain which was increasingly felt as students progress through school (see $\overline{\overline{D}}$ across bottom of the table). Parents and teachers feel about the same as their 12th graders concerning the attainment of Learning Goals. Although not fully satisfied with any curriculum area, school administrators and special service personnel seem to feel more satisfied than do parents, teachers, and 12th graders.

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[1] See page 8.

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These tables yield interesting differences and similarities when studied in terms of the eleven curriculum areas. Vocational Education, for example, is the area of greatest Cognitive need from the viewpoint of students in all grade levels sampled, but is ranked below both Science and Social Studies by teachers, parents, school administrators and special service personnel. That is, although each of the respondent groups felt Vocational Education was among the three greatest needs, some groups had stronger opinions about it than others.

In Home Economics there are even greater differences. Whereas students rank Cognitive goals of Home Economics as the second most important need (ranked 10), it ranks 7 by teachers, 6 by parents, 4 by school administrators, and 8 by special service personnel. Apparently, school administrators are more satisfied with current Home Economics programs than any other group of respondents, but students are the least satisfied; the students become increasingly dissatisfied as they progress through school.

Social Studies is considered third in degree of need by students in grades 6, 9, and 13, whereas 12th graders felt Health Education is the third greatest need. Parents, teachers, school administrators and special service personnel all ranked Social Studies as either second or third in need in agreement with 6th, 9th and 13th graders. In other words, there is almost unanimous agreement that the area of Social Studies ranks near the top as a curricular need.

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The mean discrepancy scores ($\bar{D}$) for the three highest ranking needs show, again, an increasing magnitude of need, according to student opinion, as they progress through school.[1]

In general, the data in Table IIa (Appendix C) suggest *Vocational Education*, *Social Studies* and *Home Economics* are the three curricular areas of greatest *Cognitive* need insofar as students are concerned, and that *Vocational Education*, *Social Studies* and *Science* are the three most important *Cognitive* curricular needs in the opinion of parents, teachers, school administrators and special service personnel.

Affective Needs

In the Affective domain, (Appendix D, Table IIb) Vocational Education again shows up as the overwhelming need, being ranked 11 by all groups except 6th graders. The same increasing progression of the size of the $\bar{D}$'s is evident for students in all grades. School administrators again indicate that this field represents the curriculum area of greatest need.

The second highest priority need in the Affective domain was Social Studies, though parents and administrators ranked it as third and fourth respectively. The grade progression mentioned before again characterized this need.

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[1] The $\bar{D}$ is .669, .705, .827, .854 for grades 6, 9, 12 and 13 respectively, in Vocational Education, for example. The same progression is true also for Home Economics and Social Studies, although the size of the $\bar{D}$'s is uniformly less than Vocational Education. Whereas the $\bar{D}$ in Vocational Education by teachers, special service personnel and parents is less than 12th graders, school administrators feel this need more strongly than 12th and 13th graders.

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Opinions were split as to whether Language Arts, or Home Economics rank third in the Affective domain.

In every respondent group, the general opinion indicated a somewhat greater need for Learning experiences and opportunities in the Affective components of learning in a large majority of the curriculum areas.

Overall, the greatest need expressed by all respondent groups, in both the Cognitive and Affective domains of learning, is for increased opportunities to attain the behavioral objectives of Vocational Education and Social Studies which are indicated or implied in the questionnaire.

General Attitude Toward Schools

Respondents were asked to check on a four-point scale their opinion of how good a job the schools are generally doing: "a very good job"; "a good job"; "a poor job"; "a very poor job". In a sense, the question is a rough attempt to assess respondent bias. If the magnitude and/or order of the discrepancies can be attributed to a systematic bias any resulting finding would be ambiguous in its meaning, or require qualification.

Approximately 2,220 persons answered the question. Of this group, 79% were of the opinion the schools are doing either "a good job" or "a very good job", whereas 21% felt the schools were doing "a poor job" or "a very poor job" (see Appendix E). This finding may explain to some degree why the $\overline{D}$'s tend to be relatively small. Both students and adults tend to feel generally satisfied with the kind of overall job the schools are doing.

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Regardless of their attitude toward the schools, the respondents uniformly indicated the need for a greater emphasis on Vocational Education. This variable was ranked 11, indicating the greatest need, in both the Cognitive and Affective domains by all four attitude levels. Home Economics and Social Studies remain as 2nd and 3rd priorities. Those respondents who rated the schools as doing a "poor job" and a "very poor job" felt a need for more Language Arts and Music in the Affective domain of the curriculum. These respondents also felt a need for more Science in the Cognitive aspect of the curriculum.

Of interest is the relationship of attitude toward least needed curriculum areas. In both the Cognitive and Affective domain those with positive feelings about the schools felt the lowest needs were in Mathematics and Music, whereas those with negative attitudes felt the least need in Physical Education in both domains. However, there is a tendency for respondents with positive attitudes about the kind of job the schools are doing to feel less of a discrepancy between "what is" and "what should be" than those with negative attitudes when the 11 curriculum areas are combined.

In general, however, it appears that the highest ranking needs identified by the several groups of respondents are generally independent of their attitude toward schools, as measured by this question, although the amount of need felt does appear to be related to attitude: positive attitudes are associated with lower discrepancy ($\bar{D}$) scores than are negative attitudes.

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Other Classifications of the Data

The data for all 2,220 respondents were reclassified according to Sex, County or Residence, Type of School, and Population Density. Tables IIa and IIb also contain the relevant statistics for these classifications. No new findings resulted from an analysis of these data which would substantially add to, or contradict, those already reported above. It should be pointed out, however, that Vocational Education and Home Economics were ranked first and second in each of the four counties.

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ANALYSIS IN TERMS OF BLOOM'S TAXONOMY

Respondent Groups

Appendix F (Table III) shows the average discrepancy ($\overline{D}$) and Rank (R) of Learning Goals assembled according to Bloom's Taxonomic levels for both the Cognitive (intellectual) and Affective (emotional) domains.

In the Cognitive domain, acquiring knowledge, understanding knowledge, and being able to put knowledge to use are not considered as necessary by all respondent groups as the higher level Cognitive skills of analyzing, synthesizing, and evaluating knowledge. In other words, respondents felt less of a gap between "what should be" and "what is" with respect to lower levels of intellectual functioning than they did with higher levels.

It is noteworthy that school administrators considered the ability to evaluate (the highest level) as the greatest need, whereas nearly all other respondent groups felt that being able to synthesize information is most needed.

In the Affective domain the findings are less uniform for the various respondent groups. However, an exception concerned "Being able to make and revise judgments on the basis of a consistent philosophy of life" (Affective level 5). This was viewed by every group except parents as either the most needed or second most needed Learning Goal.

Parents and teachers were the only two groups of respondents who expressed concern about students responding with a sense of satisfaction to events and situations (Level 2).

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All adult groups expressed as their chief concern valuing something, accepting values, having value preferences, having convictions, and being committed to something (Affective level 3). With the exception of 6th graders, students rated these as their second most dominant concern. Sixth graders, on the other hand, seem to feel a need for developing a life philosophy based on some kind of organization of their own developing, but as yet unorganized values.

In the Cognitive domain the students are more concerned about the adequacy of the curriculum than are the adults. Furthermore, this concern deepens as the student progresses through school.

In the Affective domain adults express greater concern for unmet needs than did students. However, as was true in the Cognitive domain, student concern increased with progression through the grades.

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ANALYSIS OF VARIANCE AMONG DATA CLASSIFICATIONS

A technical statistical analysis was conducted of the variability among the mean discrepancies ($\bar{D}$) of seven respondent groups, six Cognitive and five Affective levels of learning, and of the Learning Goals defining each level of Bloom's Taxonomy. The purpose of this analysis was to determine the following:

1. Are the $\bar{D}$'s between the respondent groups statistically significant? That is, are the differences from group to group for all 117 Learning Goals considered together larger than one might expect by chance?

2. Are the $\bar{D}$'s between the six Cognitive levels statistically significant? That is, are the differences from Cognitive level to Cognitive level larger than one might expect by chance?

3. Are the $\bar{D}$'s between the five Affective levels statistically significant?

4. Are the $\bar{D}$'s between the Learning Goals within each Cognitive level statistically significant?

5. Are the $\bar{D}$'s between the Learning Goals within each Affective level statistically significant?

All of these questions are important for an objective appraisal of results obtained and reported in Tables I, IIa, IIb, and III. Basically, these five questions ask the same thing: if the study was repeated in essentially the same manner within the region, would the results and conclusions be essentially the same? Although this analysis does not answer this general question conclusively, it does suggest that the general findings would very likely be similar to those reported on preceding pages.

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Tables IVa and IVb of this section is a summary of the analysis of variance.[1] These tables indicate that the mean differences between the respondent groups for both the Cognitive and Affective domains are statistically very significant when all Learning Goals are considered together. This means the observed differences are greater than might be expected by chance ($P < .001$). Therefore conclusions about overall respondent group differences are justifiable, and for most groups the conclusions are probably reliable.

These tables also show an F ratio for Cognitive level and Affective level differences that would occur very infrequently by chance ($P < .001$). That is, the mean discrepancies between the Cognitive levels and between the Affective levels are meaningful differences when all 2,220 respondents are considered simultaneously. This is an important finding for it verifies, or at least gives credibility to, the Center's attempt to construct the questionnaire according to Bloom's theory of the structure of educational objectives. Had these differences not been statistically significant the general conclusion regarding Cognitive and Affective levels would not have been justified.

Analysis of Learning Goal differences within Cognitive and within Affective levels indicates a general tendency that individual Learning Goals are indeed defining separate curricular objectives for any given

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[1] The computer program used for this portion of the study is one developed at the UCLA Medical Facility, #BMDO 2V, which is part of the STATPAK DC System IBM 7040/7094 located at U. C. Berkeley, where the analysis of variance for factorial designs was run.

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Cognitive or Affective level. This finding should be qualified, perhaps, because it may be a partial function of differences between respondent groups. This is not likely to be the case since the pattern of responses from group to group is highly similar (See Table III, Appendix F). Ideally, this part of the analysis should have been done separately for each respondent group, thus removing any doubt.

The variation labeled "interaction" (See lines 4, 5, and 6 in Tables IVa and IVb) indicates that respondent group differences are not a function of differences in either the Cognitive nor Affective levels, but these group differences may be in part a function of differences between the individual Learning Goals. However, this probably is not too significant a qualification, because the respondent group differences for the amount of variance attributable to this qualification is small compared to that for the variance between groups.

Interaction of Cognitive or Affective levels with Learning Goals within these levels may be considered a kind of further validity check of the questionnaire's construction. That is, this statistically significant interaction (See line 6, Tables IVa and IVb) suggests the Learning Goals are discriminating between Cognitive and Affective levels.

In general, the analysis of variance supports conclusions described earlier in the report and indicates a successful application of Bloom's theory of educational objectives.

The analysis could have been conducted in other ways, especially with respect to differences between various curriculum areas. However, time, practicability and money were realistic constraints as well as an imbalance of subject areas included in the questionnaire.

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ANALYSIS OF VARIANCE
(Factorial Design)

Curriculum Need Study
(Study #1)

TABLE IVa
COGNITIVE DOMAIN

	Source of Variation	Degrees of Freedom	Sums of Squares	Mean Squares	F ratio	Probability Level
(1)	Between Respondent Groups	6	3.39732	.56622	48.896	<.001
(2)	Between Cognitive Levels	5	1.88347	.37669	32.529	<.001
(3)	Between Learning Goals Within Cognitive Levels	9	1.84704	.20523	17.723	<.001
(4)	Interaction 1 X 2	30	.42361	.01412	1.219	N/S
(5)	Interaction 1 X 3	54	1.68679	.03124	2.698	<.01
(6)	Interaction 2 X 3	45	12.15576	.27013	23.327	< .001
(7)	Residual	270	3.12624	.01158		
	Total	419	24.52025			

TABLE IVb
AFFECTIVE DOMAIN

	Source of Variation	Degrees of Freedom	Sums of Squares	Mean Squares	F ratio	Probability Level
(1)	Between Respondent Groups	6	5.61315	.93553	111.505	<.001
(2)	Between Affective Levels	4	1.38451	.34613	41.255	<.001
(3)	Between Learning Goals Within Affective Levels	11	4.55852	.41441	49.393	<.001
(4)	Interaction 1 X 2	24	.24389	.01016	1.211	N/S
(5)	Interaction 1 X 3	66	2.10280	.03186	3.797	< .01
(6)	Interaction 2 X 3	44	7.85509	.17852	21.278	< .001
(7)	Residual	264	2.21456	.00839		
	Total	419	23.97252			

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STATISTICAL AND CONTENT ANALYSIS OF LEARNING GOALS DEFINING VOCATIONAL EDUCATION, HOME ECONOMICS, AND SOCIAL STUDIES

Each Learning Goal was analyzed to determine the percentage of respondents who were completely satisfied with the job the schools are now doing, the percentage who wanted more emphasis on each goal, and the percentage who wanted less emphasis on each goal. These computations are reported for all 117 Learning Goals in Appendix H.

The three curriculum areas for which the largest mean discrepancies were identified (Vocational Education, Home Economics, and Social Studies) are discussed below in terms of these percentages, in terms of the specific content of each item, the inter-item correlations, and in terms of the mean discrepancy score for each respondent group.[1] The statistics on which this discussion is based are shown in Tables Va, Vb, and Vc.

Vocational Education (Table Va)

Learning[2] Goal #5

Statistical Description

Seventy percent of all respondents expressed the opinion there is greater need for students to FIND PLEASURE IN DOING WORK. Only four percent of the respondents felt this area is being overemphasized.

The magnitude of the "need" increases with higher grade levels. Teachers and parents feel this need almost as much as 13th graders, but administrators and special service personnel, in agreement with 9th graders, do not feel this need as strongly as other respondent groups.

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[1] See Appendix I for detail of discrepancy scores

[2] Learning Goal numbers are those as they appear in the questionnaire.

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NORTH BAY PACE CENTER
August 22, 1967

TABLE Va

Summary of Selected Item Analysis Statistics from Curriculum Need Study #1

(VOCATIONAL EDUCATION)

Learning Goal No.	Learning Goal Description	Class	Total Percent Discrepancy[1]			Mean Discrepancies ($\overline{D}$) for Respondent Classifications[2]							Product-Moment Correlations for Total Sample (N = 2,220)[3]					
			0	+	-	6	9	12	13+	T	P	Adm.	82	5	100	69	7	90
82	Being aware of good workmanship	A1	39	57	4	.56	.62	.81	.82	..79	1.02	.76		-.05	.33	.32	.00	.33
5	Finding pleasure in doing work	A2	26	70	4	.57	1.00	1.16	1.39	1.34	1.28	1.04			-.06	-.01	-.03	-.07
100	Willingness to form judgments about one's own work	A3	35	62	4	.43	.66	.97	1.19	.97	.95	.87				.20	.00	.34
69	Producing a product with a simple tool	C2	44	51	5	.71	.57	.61	.58	.63	.48	.50					.04	.27
7	Being able to identify skills needed for a specific job	C4	26	71	3	.75	.91	1.05	1.16	.89	1.03	.90						.02
90	Evaluating work based on standards of a trade or profession	C6	38	58	4	.51	.61	.78	.80	.78	.87	.80						

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[1] "0" Means complete satisfaction
"+" Means total percent of sample wanting more emphasis
"-" Means total percent of sample wanting less emphasis

[2] "T" = Teachers
Adm = Administrators and Special Service Personnel
"P" = Parents
6, 9, 12, 13+ are student grades

[3] N varies from 1,500 to 2,220

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This Learning Goal is not correlated with any of the five remaining items in the Vocational Education curriculum area. That is, it seems to stand by itself as a need.

Implications for Project Development

See implications following Learning Goal #7.

Learning[1] Goal #7

Statistical Description

BEING ABLE TO IDENTIFY SKILLS NEEDED FOR A JOB follows a similar pattern to that of Learning Goal #5. Seventy-one percent felt an increased need. Three percent felt too much stress is being given this Learning Goal. This need is felt more strongly with increasing grade levels also. Although parents tend to feel about the same as upper grade students, teachers, administrators and special service personnel are more in agreement with students in the lower grades. Again, this item correlates zero with the remaining five items, and thus also stands alone.

Implications for Project Development

SKILLS IDENTIFICATION is an intellectual activity requiring knowledge and understanding regarding their application to tasks, as well as an ability to analyze the tasks themselves. This Learning Goal focuses attention, apparently, on the problem of occupational and career choice.

FINDING PLEASURE IN WORK is labeled an affective behavior, one that requires responsiveness to feelings of satisfaction and enjoyment.

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[1] Learning Goal numbers are those as they appear in the questionnaire.

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Gibran, in The Prophet, says, "Work is love made visible". The problem of earning a living in whatever occupation, or the problem of work in general, is one generally characterized by alienation of the Self from the Self and one's fellow man, according to Herbert Marcuse in his Eros And Thanatos. Working in alienation brings little, if any, pleasure.

The fact that these two Learning Goals have a zero relationship in the minds of the respondents would indicate an educational objective of bringing the two together: that identifying skills required for different jobs is a first step in making occupational choices which, if actively pursued, are more likely to lead to pleasure than to alienation.

Learning[1] Goal #69

Statistical Description

PRODUCING A PRODUCT WITH A SIMPLE TOOL is felt as a need by a bare majority of the respondents (fifty-one percent), whereas forty-four percent are satisfied with the extent of this activity and five percent feel it is being overemphasized. Sixth graders feel more strongly about this need than any other group. On the whole, this Learning Goal appears to be the least important of all six which define Vocational Education in this questionnaire.

Although not a significant need by itself, it does, however, correlate with BEING AWARE OF GOOD WORKMANSHIP, EVALUATING WORK BASED ON STANDARDS, and WILLINGNESS TO FORM JUDGMENTS. That is, those who believe a salient Learning Goal is BEING ABLE TO PRODUCE A PRODUCT BY USING SIMPLE TOOLS also tend to believe more stress should be placed on BECOMING AWARE

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[1] Learning Goal numbers are those as they appear in the questionnaire.

OF QUALITY WORKMANSHIP, on BEING ABLE TO EVALUATE WORK BASED ON KNOWN STANDARDS OF A TRADE PROFESSION, and on SETTING SOME JUDGMENTAL VALUE ON ONE'S OWN WORK. Put together, these items form a pattern of some significance.

Implications for Project Development

See implications following Learning Goal #100.

Learning[1] Goal #82 Statistical Description

Fifty-seven percent of all respondents desire more emphasis on AWARENESS OF GOOD WORKMANSHIP, compared to thirty-nine percent who are satisfied this Learning Goal is being properly emphasized and four percent who feel it is over-emphasized. The tendency for this need to increase as students progress through school is present, but to a small degree and the increase from grade to grade is relatively small. This is the second most strongly felt need of parents (the strongest is FINDING PLEASURE IN DOING WORK), and the second weakest of administrators and special service personnel.

This Learning Goal is moderately correlated with EVALUATING WORK BASED ON STANDARDS OF A TRADE OR PROFESSION and with a WILLINGNESS TO PLACE JUDGMENTAL VALUES ON ONE'S OWN WORK.

Implications for Project Development

See Implications following Learning Goal #100.

Learning[1] Goal #90 Statistical Description

EVALUATING WORK BASED ON STANDARDS OF A TRADE OR PROFESSION was felt as needed more by fifty-eight percent of the respondents, whereas thirty-eight percent were satisfied and four percent felt this was over-emphasized. The same grade progression characterized this goal as others noted above, although differences between the respondent groups are moderate. This item correlates moderately with FORMING JUDGMENTS ABOUT ONE'S OWN WORK and, as noted above, with PRODUCING A PRODUCT and BEING AWARE OF GOOD WORKMANSHIP.

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[1] Learning Goal numbers are those as they appear in the questionnaire.

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Implications for Project Development

See implications following Learning Goal #100.

Learning[1] Goal #100

Statistical Description

BEING WILLING TO FORM JUDGMENTS ABOUT ONE'S OWN WORK should be emphasized more in the opinion of sixty-two percent of the respondents, compared to thirty-five percent who are satisfied and four percent who feel this Learning Goal is over-emphasized. An increase in the strength of this need from grade to grade, according to students, is substantial. All adult groups agree this is a fairly important Learning Goal which is not being adequately met.

As noted above, it is correlated moderately with PRODUCING A PRODUCT, AWARENESS OF GOOD WORKMANSHIP, and EVALUATING WORK BASED ON STANDARDS.

Implications for Project Development

WILLINGNESS TO FORM JUDGMENTS ABOUT ONE'S OWN WORK implies self-assessment based on some implicit or explicit value, which is an affective behavior. It is of some interest that a student's work is characteristically assessed by someone other than himself. The data indicates a growing desire of students as they progress through the grades, for experiences which will allow them to develop a sense of self-assessment. Being able to be self-critical in what one does can be considered one of the necessary conditions for emotional and intellectual growth. This is especially true in the realm of career development.

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[1] Learning Goal numbers are those as they appear in the questionnaire.

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A vital part of the judgmental process is the role of value. A student may accept his work as good, bad, or indifferent and let it go at that. Or, he may show preferences for work quality, depending on the overall value he places on the activity or product. Finally, he may have convictions or commitments regarding the quality of his productions. It is this latter value from which growth is most likely to occur and from which there is not only a willingness to make self-appraisals, but also an automatic, internalized, necessity to do so.

These self-appraisals require the ability to EVALUATE WORK BASED ON STANDARDS which the learner has acquired during his school and home experience, which in turn have provided some of the conditions necessary for him to become AWARE OF GOOD WORKMANSHIP, though he may have no interest or commitment in quality work.

The interrelationships among these latter Learning Goals suggest behavioral objectives which emphasize a willingness of the student to criticize himself based on standards of which he is aware and which he highly values.

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Home Economics (Table Vb)

Learning[1] Goal #18

Statistical Description

BEING ABLE TO ORGANIZE A FAMILY BUDGET received the greatest stress of all six Learning Goals. Approximately two-thirds of the respondents expressed a need for an increase in emphasis on this goal, whereas only three percent felt it was overemphasized.

As before, the mean discrepancies ($\overline{D}$) increase systematically with increasing grade level. Adults feel this need slightly less than students, as is relatively consistent for most of the Learning Goals in the questionnaire. Overall, BEING ABLE TO ORGANIZE A FAMILY BUDGET is felt by most respondent groups to be the most important need of the six defining this area.

The only goal with which FAMILY BUDGET is correlated is PREPARING FOOD. All other correlation coefficients are very close to zero, indicating no relationship.

Implications for Project Development

This Learning Goal was intended to measure the cognitive ability to synthesize knowledge and information about the finances of an ongoing family. Essentially, this activity is a planning function and therefore a means to an end. A Home Economics project should have as one of its major objectives helping students learn this planning function, which would require the integration of all areas of homemaking. That is, it might be desirable to attempt to change the perception of students to

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[1] Learning Goal numbers are those as they appear in the questionnaire.

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TABLE Vb

Summary of Selected Item Analysis Statistics from Curriculum Need Study #1

(HOME ECONOMICS)

Learning Goal No.	Learning Goal Description	Class	Total Percent Discrepancy[1]			Mean Discrepancies ($\bar{D}$) for Respondent Classifications[2]							Product-Moment Correlations for Total Sample (N = 2,220)[3]					
			0	+	-	6	9	12	13+	T	P	Adm.	106	95	88	114	24	18
106	Knowing the importance of a good diet	A1	37.6	58.1	4.2	.52	.67	.89	.86	.83	.76	.86		.54	.44	.37	.32	.04
95	Developing standard of a good home	A3	49.1	45.3	5.5	.34	.38	.55	.63	.78	.63	.78			.39	.36	.36	.03
88	Identifying those things desired in the home	A4	42.7	52.1	5.0	.42	.55	.74	.61	.64	.56	.76				.32	.31	.02
114	Becoming familiar with different foods	C1	44.2	50.6	5.0	.40	.49	.63	.59	.56	.36	.44					.34	.01
24	Preparing foods for a family	C3	47.6	48.2	4.2	.54	.56	.61	.68	.55	.57	.59						.31
18	Being able to organize a family budget	C5	29.3	67.7	2.9	.75	.98	1.05	1.14	1.04	.85	.97						

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[1] "0" Means complete satisfaction
"+" Means total percent of sample wanting more emphasis
"-" Means total percent of sample wanting less emphasis

[2] "T" = Teachers
Adm. = Administrators and Special Service Personnel
"P" = Parents
6, 9, 12, 13+ are student grades

[3] N varies from 1,500 to 2,220

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help them recognize the interrelatedness of all homemaking functions.

Learning[1] Goal #106

Statistical Description

KNOWING THE IMPORTANCE OF A GOOD DIET should receive greater emphasis in the opinion of fifty-eight percent of the respondents, compared to thirty-eight percent who are satisfied with the present emphasis, and four percent who believe it is being overemphasized.

The mean discrepancy scores are the second highest of the six homemaking goals measured. Administrators, teachers, and 12th and 13th graders are in essential agreement as to the high relative strength of this need, compared to parents, and 6th and 9th graders who feel this area as a need, also, but with less intensity than other respondent groups.

The correlation of this goal with other Learning Goals is moderate, except with ORGANIZING A FAMILY BUDGET for which the correlation is near zero. The highest correlation (.54) is with DEVELOPING STANDARDS OF A GOOD HOME.

Implications for Project Development

KNOWING THE IMPORTANCE OF A GOOD DIET may be considered a part of the Affective domain of learning in that it assumes awareness on the part of the respondent that diet is related to health. Admittedly, the distinction between "knowing" as unconscious awareness and "knowing" as an intellectual bit of knowledge can be small. However, in view of the importance of diet to health it would seem desirable to provide opportunities and experiences that would assist the student in incorporating this knowledge as an integral part of his or her personality. That is, the student should unconsciously, and without effort, plan and prepare meals that are consistent with promoting good health. Implicit in these comments is that good health is part of an integrated value system relating to an overall philosophy of life, which is, according to Bloom, the highest level educational objective in the Affective domain.

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[1] Learning Goal numbers are those as they appear in the questionnaire.

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Learning[1] Goal #114

Statistical Description

Forty-four percent of the respondents felt schools are doing an adequate job of HELPING STUDENTS TO BECOME FAMILIAR WITH DIFFERENT FOODS. Fifty-one percent expressed a desire for more stress on this area. Only five percent would reduce emphasis on this Learning Goal.

On the whole, the mean discrepancies for the various respondent groups tend to be similar, though 12th graders feel this need moreso than all other groups, while administrators feel it the least of all groups. Grade progression is slight and diminishes after grade 12. Overall, this need is felt as being the lowest in importance when compared with the remaining five items defining Home Economics.

This Learning Goal is correlated moderately with (is related to) all other goals of homemaking except the one concerned with ORGANIZING A FAMILY BUDGET, which has a zero correlation, or no relationship.

Implications for Project Development

This data suggests that project development in Home Economics should not place primary emphasis on the cognitive skill of acquiring knowledge about foods because of its low ranking. It will be recalled (see Summary, page 24) that in general the desire of various respondent groups was for more emphasis on higher levels of cognitive functioning. The correlation of this item with other Homemaking items indicates this is part of a complex of interrelated activities and therefore should not be considered as an end in itself.

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[1] Learning Goal numbers are those as they appear in the questionnaire.

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Learning[1] Goal #24

Statistical Description

PREPARING FOODS FOR A FAMILY was felt as needing an increased emphasis in the educational program by forty-eight percent of the respondents, whereas four percent felt this activity was being over-stressed.

The mean discrepancies increase systematically with increasing grade level. Differences between students and adults, however, are relatively minor, though adults tend to feel slightly less of a need for this objective than do students. In general, this need is of median importance with respect to expressions of need in other homemaking areas.

This item is correlated moderately with the other five items defining Home Economics, suggesting it is part of a complex of interrelated objectives, as indicated in the discussion above.

Implications for Project Development

Although considerable emphasis is now placed on food preparation as a necessary "real life" skill in Home Economics instruction, it is clear that additional emphasis may be warranted since forty-eight percent of the respondents felt a need for more stress on this educational objective. Again, however, this activity needs to be closely integrated with other homemaking objectives.

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[1] Learning Goal numbers are those as they appear in the questionnaire.

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Learning[1] Goal #95 Statistical Description

DEVELOPING STANDARDS OF A GOOD HOME requires additional emphasis in the opinion of forty-five percent of the respondents, compared to six percent who feel this goal is overemphasized and forty-nine percent who are satisfied it is being attained.

Although overall this is the second lowest need, as measured by the $\overline{D}$'s, it is felt the greatest by parents, teachers, and administrators. Students show an increasing desire for experiences in attaining this objective as they progress through school, but it is not until they are out of high school and in Junior College that it begins to take on the same importance felt by the adult respondents.

The highest correlation of this item is with KNOWING THE IMPORTANCE OF A GOOD DIET (.54), whereas the lowest correlation is with BEING ABLE TO ORGANIZE A FAMILY BUDGET (.04). This Learning Goal's relationship to the remaining goals of Home Economics is moderate.

Implications for Project Development

This Learning Goal appears to be concerned with the development of a value of a more or less specific kind, although it does appear to be somewhat related to the importance of diet and health. This would suggest that home standards tend to include diet standards in the minds of these respondents. Therefore, project development could include as one of the objectives an attempt to show how a good diet, as well as other functions of the home, are part of what might be included in a set of "standards" for the home.

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[1] Learning Goal numbers are those as they appear in the questionnaire.

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Learning[1] Goal #88

Statistical Description

More emphasis should be placed on IDENTIFYING THOSE THINGS DESIRED IN THE HOME according to fifty-two percent of the respondents, compared to forty-three percent who were satisfied and five percent who believed the objective is overemphasized.

School administrators and 12th graders both feel somewhat more strongly about this goal as a need than the other respondent groups, although differences between respondent groups are not very great. As was the case for other Learning Goals, there is a progression in the degree to which the goal is desired as students progress through school.

This item correlated moderately with all Home Economics learning objectives except that of BEING ABLE TO ORGANIZE A FAMILY BUDGET.

Implications for Project Development

That which is desired is believed to be one of the important first steps in developing a value system. Therefore, an objective for a Home Economics project could be to provide the conditions necessary for students to develop "want" values associated with the home. This might include both sides of the question: that is, provide the student with opportunities, also, to examine, experience, and decide not to "want". This might be accomplished by providing the student with contrasting experiences in varying standards of living. In general, it is fairly evident that these Home Economics objectives suggest an increased emphasis on the Affective components of learning, especially as they relate to values and value systems. The intellectual activities could be used as vehicles - as means to an end - for attaining "standards" of health and home, for example.

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[1] Learning Goal numbers are those as they appear in the questionnaire.

Social Studies (Table Vc)

Introductory Comments

Social Studies is one of the curriculum areas for which there is a disproportionate number of Learning Goals (See page 7). This arises out of the fact that it is an area defined by four major subjects - History, Civics, Geography, and Economics. Each of these subjects are defined by six items in the questionnaire. Since all statistics reported have been on curriculum areas (rather than on subject-matter areas), the statistical and content analysis of the Social Studies curriculum is discussed below on that basis also. More specifically, 12 of the 24 Social Studies items are discussed which respondents indicated the strongest desire for more emphasis in the educational program. However, Table Vc shows data for all 24 Learning Goals. Readers desiring to study these data in more detail should study this table carefully. Ideally, a thorough analysis should be reported. However, the intent of this report is to suggest possible interpretations and their implications for project development, rather than attempt to propose answers.

Of the 12 Social Studies Learning Goals selected for comment, eight are in the Affective domain and four are in the Cognitive domain. Six of these twelve are concerned with the broad area of personal and social economics which are discussed first.

Learning[1] Goals #53, 48 and 70

Statistical Description (Personal Economics)

More emphasis should be placed on LEARNING HOW TO MANAGE MONEY in the opinion of seventy percent of all respondents, PLANNING A BUDGET FOR

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[1] Learning Goal numbers are those as they appear in the questionnaire.

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August 28, 1967

TABLE Vc

Summary of Selected Item Analysis Statistics from Curriculum Need Study #1

(SOCIAL STUDIES)

Learning Goal No.	Learning Goal Description	Class	Total Percent Discrepancy [1]			Mean Discrepancies ($\overline{D}$) for Respondent Classifications [2]						
			0	+	-	6	9	12	13+	T	P	Adm.
25	Knowing that people in other lands have contributed to how we live	A1	49	45	6	.34	.38	.55	.63	.78	.78	.63
12	Knowing the earth has physical features	A1	61	28	11	.24	.11	.27	.23	.27	.27	.22
9	Wanting to obey the laws of conservation	A2	30	65	4	.53	.80	1.06	.97	.95	1.02	.94
56	Cooperating with the law	A2	36	59	5	.53	.68	.81	.78	.99	.90	.78
53	Learning how to manage money	A3	27	70	2	.73	1.05	1.19	1.15	.94	1.13	1.00
13	Accepting the importance of law in our daily life	A3	34	61	5	.61	.76	.82	.86	.93	.85	.85
48	Planning a budget for one's own use	A4	31	66	3	.66	.86	1.02	1.13	.84	.98	.84
22	Able to identify laws of most help to our country	A4	30	67	3	.65	.77	.90	.97	.86	1.07	.77
57	Identifying the things in the past that benefit our way of life	A4	45	48	7	.30	.41	.57	.63	.83	.82	.57
29	Knowing how the past has affected our way of life	A5	48	43	8	.26	.30	.52	.63	.78	.74	.57
83	Deciding best place to live based on available facts	A5	36	60	4	.55	.82	.98	.98	.71	.59	.68
8	Determining if tax dollars are spent wisely	A5	24	72	3	.69	1.04	1.14	1.35	1.14	1.24	1.06
52	Knowing major periods of history	C1	52	36	11	.28	.16	.28	.34	.62	.53	.46
21	Able to read a map	C1	48	47	5	.35	.50	.59	.59	.65	.50	.62
33	Understanding the Constitution of the U. S.	C2	39	56	4	.78	.62	.69	.78	.79	.91	.67
70	Spending money wisely	C2	24	73	3	.84	1.03	1.24	1.11	1.02	1.15	.95
66	Using info. from past to solve problems of today	C3	39	56	4	.48	.60	.74	.82	.96	.90	.78
63	Knowing how oceans and physical features of earth change climate	C3	57	36	8	.26	.19	.39	.41	.50	.47	.44
78	Knowing how a law is made	C4	42	53	5	.72	.57	.54	.65	.67	.90	.66
38	Knowing how our government is supported	C4	35	61	4	.66	.72	.68	.91	.80	.98	.82
89	Making generalizations from historical facts	C5	50	41	9	.38	.26	.36	.58	.75	.46	.48
51	Being able to plan or map out a trip across country	C5	40	56	3	.66	.67	.83	.58	.68	.47	.54
64	Being able to make sound judgments about political issues	C6	27	69	4	.56	.83	1.08	1.40	1.21	1.27	1.22
60	Being able to compare different economic systems	C6	37	57	5	.55	.59	.71	.94	.82	.92	.80

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(See following page for Footnotes 1 and 2)

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TABLE Vc
(Cont.)

Summary of Selected Item Analysis Statistics from Curriculum Need Study #1

(SOCIAL STUDIES)

Product-Moment Correlations for Total Sample (N = 2,220)[3]

Learning Goal No.	25	12	9	56	53	13	48	22	57	29	83	8	52	21	33	70	66	63	78	38	89	51	64	60
25	-	.00	.03	-.01	-.05	-.04	-.08	-.07	-.07	-.04	.01	.02	-.05	-.06	-.06	-.02	-.07	-.03	.00	-.09	.00	.02	-.06	-.05
12		-	-.07	-.20	-.39	.02	-.34	.01	-.14	.02	-.28	.03	-.07	-.15	-.10	-.64	-.18	-.19	-.14	.23	-.12	-.24	-.17	-.17
9			-	.04	.17	.00	.17	.06	-.03	.02	.14	.08	-.05	.13	.00	.14	-.02	-.56	-.02	.03	.00	.71	.01	.00
56				-	.33	-.04	.31	.02	.30	-.02	.27	-.09	.20	.21	.31	.36	.25	.21	.33	.31	.20	.23	.33	.26
53					-	-.02	.59	.05	.26	.00	.42	-.12	.12	.24	.29	.60	.26	.18	.30	.33	.17	.35	.35	.36
13						-	-.03	.05	-.04	.01	-.04	.07	.00	.05	.03	-.03	-.03	-.04	-.02	.03	-.07	-.04	-.04	.00
48							-	.02	.27	.01	.41	-.10	.14	.24	.29	.54	.25	.19	.29	.33	.19	.36	.34	.31
22								-	.06	-.02	.03	-.04	-.01	.04	.02	.00	.07	.00	.02	.02	-.02	.07	.08	.04
57									-	-.04	.22	-.14	.37	.21	.30	.22	.44	.28	.30	.33	.33	.21	.35	.38
29										-	.00	.03	-.03	.02	-.02	-.01	-.04	-.04	-.04	-.04	-.02	-.01	-.02	-.06
83											-	-.12	.10	.21	.19	.47	.28	.19	.25	.27	.16	.33	.34	.32
8												-	-.06	.59	-.09	-.14	-.21	-.03	-.09	-.18	-.11	-.07	-.71	-.18
52													-	.18	.31	.08	.28	.27	.30	.25	.34	.18	.22	.26
21														-	.20	.19	.16	.21	.22	.20	.14	.33	.15	.20
33															-	.26	.29	.23	.38	.39	.26	.20	.27	.29
70																-	.25	.19	.31	.30	.17	.32	.34	.30
66																	-	.25	.29	.29	.32	.19	.40	.32
63																		-	.28	.20	.21	.19	.22	.27
78																			-	.40	.29	.21	.29	.30
38																				-	.26	.20	.39	.34
89																					-	.18	.25	.27
51																						-	.20	.23
64																							-	.40
60																								-

---

[1] "0" Means complete satisfaction
"+" Means total percent of sample wanting more emphasis
"-" Means total percent of sample wanting less emphasis

[2] "T" = Teachers
Adm. = Administrators and Special Service Personnel
"P" = Parents
6, 9, 12, 13+ are student grades

[3] N varies from 1,500 to 2,220

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ONE'S OWN USE for sixty-six percent, and SPENDING MONEY WISELY for seventy-three percent of the respondents.

Students in grades 12 and 13 indicated the greatest concern over needing more opportunity in these areas than other respondent groups, although the concern is almost uniformly high on the part of all respondent groups.

LEARNING HOW TO MANAGE MONEY is highly correlated with PLANNING A BUDGET and SPENDING MONEY WISELY. This objective is moderately correlated with other items concerned with Economics, Civics and Law, which is true, also, of PLANNING A BUDGET and SPENDING MONEY WISELY.

Implications for Project Development

Considering the high percentage of respondents desiring an increased emphasis on these three interrelated objectives of personal finances, and considering that two of these relate to personal values (Management and Planning), it would seem that program emphasis could be placed on understanding and developing value systems associated with money more so than on teaching students the cognitive tasks of money management and budgeting. The rather large percentage of respondents who indicated a desire for more emphasis on these objectives suggests that both students and adults could make a meaningful idea contribution to possible programs designed to fulfill these needs.

Learning[1] Goals #8, 38 and 60

Statistical Description (Social Economics)

DETERMINING IF TAX DOLLARS ARE SPENT WISELY, KNOWING HOW OUR GOVERNMENT IS SUPPORTED and BEING ABLE TO COMPARE DIFFERENT ECONOMIC SYSTEMS are Learning Objectives needing more emphasis in the opinion of seventy-two percent, sixty-one percent and fifty-seven percent respectively of the total sample.

---

[1] Learning Goal numbers are those as they appear in the questionnaire.

Nearly every respondent group indicated the discrepancy between "what is" and "what should be" with respect to DETERMINING IF TAX DOLLARS ARE SPENT WISELY is the largest of the 24 objectives which define Social Studies. Of special interest is the finding that junior college students and parents feel this need more strongly than the other respondent groups.

Although the intensity of the relative importance of the two latter objectives is less than for other Social Studies objectives, they are nevertheless fairly strong for each respondent group, except for 6th graders.

There is a slight (though statistically significant) tendency for DETERMINING IF TAX DOLLARS ARE SPENT WISELY to be inversely related to KNOWING HOW OUR GOVERNMENT IS SUPPORTED and ABLE TO COMPARE DIFFERENT ECONOMIC SYSTEMS. A moderately positive relationship was found between the latter two objectives.

Implications for Project Development

DETERMINING IF TAX DOLLARS ARE SPENT WISELY is an objective requiring the integration of several value systems within the individual (an Affective type of learning), whereas KNOWING HOW THE GOVERNMENT IS SUPPORTED and how *that* method of support is related to other economic systems are essentially cognitive activities. The inverse relationship between the two cognitive Learning Goals and the single affective Learning Goal suggests that an economics program would have as one of its objectives an attempt to assist the student in clarifying his value judgements about the expenditure of tax dollars in light of a broader

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frame of reference.

Overall, programs designed to meet student objectives in personal and social economics might profit from a careful consideration of assisting students to become more aware of their existing economic values and how these values are determined. One of the determinants, of course, can be the intellectual activities of analysis and evaluation of information, as indicated by an understanding of how our government is supported (analysis) and making comparisons of different economic systems (evaluation).

Learning[1] Goals #56, 13, 22 & 64

Statistical Description (Civics)

In excess of sixty percent of all respondents were of the opinion more emphasis should be placed on objectives concerning COOPERATING WITH THE LAW, ACCEPTING THE IMPORTANCE OF LAW IN OUR DAILY LIFE, BEING ABLE TO IDENTIFY LAWS OF MOST HELP TO OUR COUNTRY, and BEING ABLE TO MAKE SOUND JUDGEMENTS ABOUT POLITICAL ISSUES.

Again, concern about these objectives increases with grade level. Although there is a drop-off of concern on the part of adult respondents, the size of the mean discrepancy (indicating need) remains fairly high with respect to other learning goals. Junior college students indicate their greatest concern of all 24 Social Studies items is that of BEING ABLE TO MAKE SOUND JUDGEMENTS ABOUT POLITICAL ISSUES.

The matrix of correlation coefficients showing the interrelationships for these particular Learning Goals shows that COOPERATING WITH THE LAW and BEING ABLE TO MAKE SOUND POLITICAL JUDGEMENTS are the only ones with any interrelationship. All other relationships are essentially zero.

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[1] Learning Goal numbers are those as they appear in the questionnaire.

Implications for Project Development

MAKING SOUND POLITICAL JUDGEMENTS is an intellectual objective requiring evaluation of diverse information. The objectives concerned with law are designed to assess responsiveness, simple values, and elementary value systems (i.e., separate values linked together when the occasion so demands). It is clear that though taken individually all of these objectives are considered important in the minds of the respondents, essentially they lack cohesion (i.e., are not interrelated). An educational program objective could be to bring together into a single cohesive system of attitude-behaviors these diverse values and value systems, based, in part, on purely intellectual activities.

Learning[1] Goal #83

Statistical Description

DECIDING ON THE BEST PLACE TO LIVE BASED ON AVAILABLE FACTS should be given more emphasis according to sixty percent of the respondents.

Students in the 12th and 13th grades are more concerned about this objective than all other groups of respondents. Parents, school administrators, and 6th graders are about equal with respect to their feeling that this objective is of relatively less importance than other Social Studies objectives.

This objective is substantially correlated with two discussed earlier, viz., SPENDING MONEY WISELY and LEARNING HOW TO MANAGE MONEY.

Implications for Project Development

Like other Social Studies Learning Goals discussed in this section this objective might be considered for inclusion in a program of objectives for Home Economics, especially in view of the statistical correlation with SPENDING MONEY WISELY and LEARNING HOW TO MANAGE MONEY. Although the value judgement "best place to live" might be discounted somewhat, an objective could be one which emphasizes the decision-making process and information necessary to make decisions regarding where to live.

---

[1] Learning Goal numbers are those as they appear in the questionnaire.

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Learning[1] Goal #9

Statistical Description

More emphasis should be placed on WANTING TO OBEY THE LAWS OF CONSERVATION according to sixty-five percent of the respondents.

Twelfth graders and parents tend to feel more strongly about this Learning Goal than do other respondent groups, although all groups rate this as being relatively fairly important.

There is a very strong relationship of this objective to BEING ABLE TO PLAN OR MAP OUT A TRIP ACROSS THE COUNTRY, but CONSERVATION is not related to any other learning objective in the Social Studies area.

Implications for Project Development

This Affective behavior which was designed to assess a desire to respond on an emotional level to elementary values could be a Learning Goal which is part of a set of objectives for helping students become more responsive in a number of natural settings. Planning a trip requires a synthesis of many kinds of information, among which could be conservation laws and prevalent attitudes regarding these laws.

---

[1] Learning Goal numbers are those as they appear in the questionnaire.

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Comment on Statistical and Content Analysis

The purpose of the foregoing discussion of selected Learning Goals and their associated statistics is primarily to stimulate thought - not to provide answers. If the reader feels emotionally chagrined by the discussion and is impelled to make alternate interpretations and believes that additional information is needed, the purpose of this section has been attained.

Another way in which this analysis might have been conducted may be termed "configuration analysis". That is, both the curriculum area and the subject area concept could be ignored and the analysis take the form of Learning Goal configurations. For example, the 20 or 30 Learning Goals with the largest mean discrepancies $(\bar{D})$ could be analyzed as a group with respect to their specific content and nothing else. Or, these same objectives could be analyzed in terms of their intended Affective and Cognitive components, but using the specific content as a starting point for programmatic ideas.

A somewhat more difficult method of analysis, though a highly profitable one, would be to study the configuration of the correlation coefficients for all 117 Learning Goals for each respondent group. This would require the detailed study of 6,786 correlation coefficients for each respondent group,[1] again ignoring curriculum and subject area and considering only the content of the item. This could be in terms of the obvious content, or in terms of Bloom's Taxonomy.

---

[1] This number was derived from the formula 1/2N(N-1), which gives the number of pairs for a set of numbers. In this case we have $\frac{117(116)}{2} = 6,786$.

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Undoubtedly, the reader will have additional ideas. It is not inconceivable that a new kind of curriculum area might result from a long and thoughtful consideration of these and other data. For example, consider the possibility of a curriculum designed to attain a terminal performance objective to increase student awareness, an objective to increase student responsiveness, an objective to make explicit student values and value systems, and the objective of an integrated philosophy of life which is consistent with the students' world view.

Consider, also, similar curriculum area concepts in the intellectual domain of learning: an information curriculum organized perhaps around present concepts; an understanding curriculum designed to meet the objective of increasing student understanding of the interrelationships of various kinds of information; an application curriculum - or, every third year devoted to nothing but the application of that which has been learned during the previous two years, etc.; again, a curriculum area devoted exclusively to the analysis of information, another devoted to synthesis, and still another devoted exclusively to evaluating and integrating as much of what has been learned as possible.

Although these kinds of curriculum areas can be separately defined by terminal performance objectives, they can also be integrated by other terminal performance objectives. For example, objectives could be developed for the purpose of integrating the Affective curriculum of "receiving" with the Cognitive curriculum of "information acquisition". At the other end of the scale objectives could be developed for integrating the Cognitive domain curriculum of "evaluating" with the Affective domain curriculum devoted to development of a philosophy of life.

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A thoughtful analysis of the content of the Learning Goals used in this study in the context of present day curricular areas and in the context of the concept of "terminal performance objectives" could result in some productive and creative ideas for assisting with the process of modernizing education. This kind of creative thinking need not be limited by the technical limitations of this study discussed in the following section.

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LIMITATIONS OF THIS STUDY

This study should be viewed as an exploratory attempt to determine the value of a new technique for assessing the curricular objectives of students, in addition to its potential use as a decision-making tool. Accordingly, there are limitations to this study that should be considered by the thoughtful reader.

1. The Learning Goals used in this study are but a small fraction of the possible goals that might have been investigated. That is, these goals should be considered a sample of a larger domain of curricular goals. The sampling leaves much to be desired because there is a disproportionate emphasis on Social Studies, the Language Arts, and the Fine Arts. As a result, there are probably distortions arising from omission of content that may be of real value and importance to the respondents. Omitted curriculum content conceivably could be given greater importance in terms of "need" than those which respondents were asked to evaluate.

2. The reference frame used for writing the Learning Goals is rather loose. Future attempts in this regard should adhere more closely to a theoretical structure, such as Bloom's Taxonomy, and simultaneously to a curriculum value structure, such as "need to know" versus "nice to know". A few of the Learning Goals have been criticized on grounds of irrelevance, triviality, and ambiguity, with some justification.

3. There are a number of goals in the questionnaire whose relationship to Bloom's Taxonomy is equivocal. Goals should be written by experts

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9/15/67

in each curriculum area in terms of the reference frames mentioned above, and then classified "blind" by experts in the taxonomy.

Another procedure that would improve the theoretical validity of the questionnaire would be to ask small samples of each respondent group to rank the relative importance of each goal in terms of the taxonomy. If this "inter-judge" agreement is high, the content validity with respect to the various respondent groups would be somewhat strengthened. In theory, at least, there should be agreement between the two procedures: that is, agreement between expert rankings and the rankings of the several respondent group representatives.

4. There are some real questions about the sampling procedures and the number obtained with respect to the adult respondent groups. Future studies of this kind should sample adult groups on a more systematic basis.

5. Another limitation is that small variations in the instructions to respondents were noted to have occurred from time to time, depending on varying circumstances. Each of the staff members and others who administered the questionnaire had varying interpretations of questions asked by respondents as they progressed through the form. This problem can be eliminated with increased time spent in pre-administration training.

6. No independent ("outside") criterion was used with which to determine what might be labeled predictive validity. For example, no hard facts have been obtained to back up the findings - at least facts for the region in which the study was conducted. Although the original plan called for the collection of this information, time, money, and

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personnel limitations precluded this very important part of the study.

Facts regarding the extent and character of opportunities and practices in Vocational Education, Home Economics, and Social Studies would provide a clearer understanding of the meaning results reported here, as well as provide important information for program development of an innovative and/or exemplary nature.

Highly valuable would be an independent statistical criterion, such as the number of hours of opportunity available to students in the four county region in each of the curriculum areas measured by this study.[1] Each Learning Goal could then be assessed against this criterion. For this purpose a multiple step-wise regression analysis would provide information showing the minimal set of Learning Goals in each curriculum area necessary to predict curricular "opportunity".

These limitations qualify in some degree this study, but they do not prohibit thoughtful consideration of the main findings, because the findings have an internal consistency of a kind that is indicative of some genuine curricular concerns of both students and adults.

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[1] One possible source of this information would be the State Department of Education.

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APPENDIX A

Initial "Unmet Needs" Survey of School-Oriented Personnel

(The "Administrator Survey")

APPENDIX A

NORTH BAY PACE CENTER
1005 Jefferson Street
Napa, California 94558
255-2883

INITIAL "UNMET NEEDS" SURVEY OF SCHOOL-ORIENTED PERSONNEL

1.0 Statistical Description of School or School District:

____________________	____________________
Name of School/School District	Name of Person Completing Report
__________ Elementary	____________________
	Position
__________ Secondary	
	____________________
__________ Unified	Telephone Number

Average daily attendance (check below according to latest figures)

__________0 - 399

__________400 - 999

__________1,000 - 4,999

__________5,000 - 9,999

__________10,000 - 14,999

__________15,000 - 24,999

__________25,000 - 49,999

__________50,000 +

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APPENDIX A

School Setting: (check appropriate descriptive categories)

_____Rural
_____Urban
_____Suburban

_____Public
_____Non-Public
_____Profit
_____Non-Profit

(Socio-Economic Class)
_____Low
_____Middle
_____Upper

Others: (Describe)____

____

2.0 In your opinion, what are the three most important STUDENT needs in your community?

Need A: ____
____
____

Need B: ____
____
____

Need C: ____
____
____

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APPENDIX 3

2.1 What percentage of your students would you estimate are involved in each of the needs identified on the preceding page?

	Need A	Need B	Need C
0 - 10%	______	______	______
11 - 20%	______	______	______
21 - 30%	______	______	______
31 - 40%	______	______	______
41 - 50%	______	______	______
51 - 60%	______	______	______
61 - 70%	______	______	______
71 - 80%	______	______	______
81 - 90%	______	______	______
91 - 100%	______	______	______

2.2 In terms of cited STUDENT needs, what is your assessment of the present levels of achievement of the students involved?

Need A: ____
____
____

Need B: ____
____
____

Need C: ____
____
____

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APPENDIX A

2.3 In terms of the perspectives of the total community, the cited STUDENT needs have:

	Need A	Need B	Need C
High Relevancy	______	______	______
Medium Relevancy	______	______	______
Low Relevancy	______	______	______

2.4 What are the approximate numbers of students involved in each of the cited needs?

Need A ______________________

Need B ______________________

Need C ______________________

2.5 How severe is each need?

	Severe	Moderate
Need A	______	________
Need B	______	________
Need C	______	________

2.6 Estimate the rise of population involved in each STUDENT need during the next five-year period.

	1%	25%	50%	75%	100%	125%	150%	200%
Need A	/	/	/	/	/	/	/	/
Need B	/	/	/	/	/	/	/	/
Need C	/	/	/	/	/	/	/	/

DHK:cd
9/6/67

APPENDIX A

2.7 In terms of immediate action, how urgent is the resolution of each STUDENT need?

	Highly Critical	Critical	Moderately Critical
Need A			
Need B			
Need C			

DHK:cd
9/6/67

APPENDIX B

FREQUENCY DISTRIBUTION OF SCHOOL ADMINISTRATORS' RESPONSES TO NEED SURVEY

APPENDIX B

NORTH BAY PACE CENTER
1005 Jefferson Street
Napa, California 94558
255-2883

FREQUENCY DISTRIBUTION OF SCHOOL ADMINISTRATORS' RESPONSES TO NEED SURVEY

CODE	FREQUENCY	CODE	FREQUENCY
1.1	1	9.0	8
1.4	1	9.1	3
3.1	1	9.12	2
4.0	1	9.14	3
4.1	5	9.3	1
4.2	5	10.0	1
4.4	1	10.1	22 (curriculum content)
4.5	5	10.2	24 (curriculum method)
4.6	1		
5.1	3	10.3	10
5.2	2	10.4	6
5.4	1	10.41	5
6.3	5	10.42	1
7.1	1	10.43	2
7.2	1	12.1	2
8.0	3	12.4	4
8.1	3	13.2	1
8.4	1	14.0	1

DHK/cd
9/6/67

APPENDIX B

Responses to survey (cont.)

CODE	FREQUENCY	CODE	FREQUENCY
14.2	3	33.5	3
15.0	1	34.0	5
18.0	1	34.1	4
18.1	4	34.3	4
18.2	6	34.4	1
18.4	7	35.1	3
19.0	1	35.4	2
19.1	1	36.0	1
20.0	4	36.1	1
24.0	15 (Library)	36.2	2
25.0	2	36.4	6
26.0	1	37.0	3
27.0	5	37.1	3
28.0	6	37.12	2
29.0	12 (Pre-school)	37.13	4
30.0	11 (Recreation)	38.12	2
31.0	1	38.13	3
33.0	2		
33.1	1		
33.3	2		
33.4	5		

DHK/cd
9/7/67

APPENDIX C

TABLE IIa

Mean Discrepancy Scores ($\bar{D}$) for the COGNITIVE Domain in 11 Curriculum Areas, with Respect to Respondent Groups and Other Classifications of the Data.

NORTH BAY PACE CENTER
April 12, 1967

APPENDIX C
TABLE IIa

STUDY #1 RESULTS

Mean Discrepancies ($\overline{D}$) -- COGNITIVE -- 11 Curriculum Areas

Gross Content	Grade 6		Grade 9		Grade 12		Grade 13 And Up		Teachers		Parents		School Adminis-trators		Special Services Personnel	
	$^*\overline{D}$	R	$^*\overline{D}$	R	$^*\overline{D}$	R	$^*\overline{D}$	R	$^*\overline{D}$	R	$^*\overline{D}$	R	$^*\overline{D}$	R	$^*\overline{D}$	R
Math	0.205	(1)	0.364	(4)	0.588	(5)	0.538	(2)	0.674	(6)	0.741	(7)	0.714	(8)	0.565	(4)
Language Arts	0.308	(2)	0.362	(3)	0.577	(4)	0.679	(6)	0.671	(5)	0.752	(8)	0.621	(7)	0.608	(7)
Social Studies	0.561	(9)	0.562	(9)	0.688	(7)	0.760	(9)	0.809	(10)	0.810	(10)	0.792	(9)	0.724	(9)
Science	0.414	(4)	0.457	(7)	0.734	(8)	0.760	(8)	0.866	(11)	0.922	(11)	0.881	(11)	0.788	(11)
Arts	0.486	(8)	0.433	(6)	0.595	(6)	0.737	(7)	0.541	(4)	0.485	(4)	0.384	(3)	0.574	(6)
Music	0.464	(6)	0.341	(1)	0.451	(1)	0.553	(3)	0.391	(1)	0.373	(2)	0.333	(2)	0.417	(2)
Vocational Ed.	0.669	(11)	0.705	(11)	0.827	(11)	0.854	(11)	0.774	(9)	0.793	(9)	0.857	(10)	0.754	(10)
Home Economics	0.618	(10)	0.684	(10)	0.776	(10)	0.808	(10)	0.697	(7)	0.678	(6)	0.385	(4)	0.641	(8)
Foreign Language	0.370	(3)	0.352	(2)	0.465	(3)	0.560	(4)	0.427	(2)	0.423	(3)	0.167	(1)	0.458	(3)
Health Ed.	0.434	(5)	0.561	(8)	0.741	(9)	0.677	(5)	0.703	(8)	0.639	(5)	0.476	(6)	0.571	(5)
Physical Ed.	0.474	(7)	0.424	(5)	0.456	(2)	0.444	(1)	0.441	(3)	0.311	(1)	0.405	(5)	0.280	(1)
$\overline{\overline{D}}$	0.455		0.477		0.627		0.670		0.636		0.630		0.547		0.580	
s.d.	0.127		0.126		0.129		0.124		0.155		0.192		0.228		0.145	
N	368		608		708		158		95		121		14		129	

$^*\overline{D}$ = Average discrepancy
R = Rank order of descrepancy; high rank = most important need

DHK/meb
9/7/67

NORTH BAY PACE CENTER
April 12, 1967

APPENDIX C
TABLE IIa

STUDY #1 RESULTS

Mean Discrepancies (D) -- COGNITIVE -- 11 Curriculum Areas

Gross Content	Businessmen		Males		Females		Marin County		Sonoma County		Solano County		Napa County	
	* $\bar{D}$	R	* $\bar{D}$	R	* $\bar{D}$	R	* $\bar{D}$	R	* $\bar{D}$	R	* $\bar{D}$	R	* $\bar{D}$	R
Math	0.792	(6)	0.482	(6)	0.465	(3)	0.434	(4)	0.492	(4)	0.477	(4)	0.533	(4)
Language Arts	1.036	(9)	0.457	(3)	0.534	(5)	0.456	(5)	0.518	(5)	0.522	(6)	0.548	(5)
Social Studies	0.885	(8)	0.631	(9)	0.672	(9)	0.658	(9)	0.641	(8)	0.651	(8)	0.678	(8)
Science	0.762	(5)	0.622	(8)	0.629	(7)	0.613	(8)	0.620	(7)	0.653	(9)	0.641	(7)
Arts	0.531	(2)	0.477	(5)	0.579	(6)	0.533	(6)	0.560	(6)	0.449	(3)	0.593	(6)
Music	0.583	(3)	0.388	(2)	0.449	(2)	0.408	(2)	0.439	(2)	0.392	(2)	0.468	(2)
Vocational Ed.	1.125	(11)	0.732	(11)	0.789	(11)	0.783	(11)	0.785	(11)	0.672	(11)	0.787	(11)
Home Economics	0.833	(7)	0.653	(10)	0.758	(10)	0.696	(10)	0.752	(10)	0.667	(10)	0.710	(10)
Foreign Language	0.458	(1)	0.354	(1)	0.471	(4)	0.406	(1)	0.377	(1)	0.479	(5)	0.466	(1)
Health Ed.	1.042	(10)	0.607	(7)	0.630	(8)	0.579	(7)	0.642	(9)	0.617	(7)	0.682	(9)
Physical Ed.	0.667	(4)	0.475	(4)	0.395	(1)	0.423	(3)	0.442	(3)	0.382	(1)	0.513	(3)
$\bar{\bar{D}}$	0.792		0.534		0.579		0.544		0.570		0.542		0.602	
s.d.	0.209		0.115		0.123		0.125		0.125		0.108		0.101	
N	8		1017		1190		819		688		445		268	

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* $\bar{D}$ = Average discrepancy
R = Rank order of discrepancy; high rank = most important need

DHK/meb
9/7/67

NORTH BAY PACE CENTER
April 12, 1967

APPENDIX C
TABLE IIa

STUDY #1 RESULTS

Mean Discrepancies ($\bar{D}$) -- COGNITIVE -- 11 Curriculum Areas

Gross Content	All Public Schools		All Nonpublic Sectarian Schools		All Nonpublic Nonsectarian Schools		Farm		Nonfarm		Central City		Noncentral City		Other Urban	
	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R
Math	0.478	(4)	0.419	(2)	0.833	(9)	0.574	(5)	0.315	(1)	0.523	(4)	0.452	(4)	0.496	(6)
Language Arts	0.504	(6)	0.454	(3)	0.675	(4)	0.571	(4)	0.462	(5)	0.589	(7)	0.486	(5)	0.490	(5)
Social Studies	0.647	(9)	0.685	(8)	0.804	(7)	0.669	(9)	0.587	(9)	0.690	(9)	0.659	(9)	0.648	(8)
Science	0.632	(8)	0.576	(5)	0.833	(10)	0.658	(8)	0.457	(3)	0.743	(11)	0.634	(8)	0.611	(7)
Arts	0.493	(5)	0.729	(9)	0.781	(5)	0.480	(2)	0.646	(10)	0.560	(6)	0.567	(6)	0.470	(4)
Music	0.393	(1)	0.577	(6)	0.500	(2)	0.400	(1)	0.497	(7)	0.452	(2)	0.438	(3)	0.386	(1)
Vocational Ed.	0.736	(11)	0.908	(10)	0.783	(6)	0.682	(10)	0.759	(11)	0.692	(10)	0.798	(11)	0.742	(11)
Home Economics	0.669	(10)	0.912	(11)	1.018	(11)	0.815	(11)	0.536	(8)	0.671	(8)	0.722	(10)	0.705	(10)
Foreign Language	0.424	(3)	0.396	(1)	0.350	(1)	0.517	(3)	0.492	(3)	0.492	(3)	0.393	(1)	0.409	(2)
Health Education	0.609	(7)	0.657	(7)	0.817	(8)	0.642	(7)	0.436	(2)	0.554	(5)	0.596	(7)	0.689	(9)
Physical Ed.	0.419	(2)	0.503	(4)	0.600	(3)	0.596	(6)	0.460	(4)	0.333	(1)	0.418	(2)	0.432	(3)
$\bar{\bar{D}}$	0.546		0.620		0.727		0.600		0.513		0.573		0.560		0.553	
s.d.	0.111		0.171		0.176											
N	1841		346		20		152		100		148		1067		738	

*$\bar{D}$ = Average discrepancy
R = Rank order of discrepancy; high rank = most important need

DHK/meb
9/7/67

APPENDIX D

TABLE IIb

Mean Discrepancy Scores ($\bar{D}$) for the AFFECTIVE Domain in 11 Curriculum Areas with Respect to Respondent Groups and Other Classifications of the Data.

APPENDIX D
TABLE IIb

NORTH BAY PACE CENTER
April 17, 1967

STUDY #1 RESULTS

Mean Discrepancies ($\overline{D}$) -- AFFECTIVE -- 11 Curriculum Areas

Gross Content	Grade 6		Grade 9		Grade 12		Grade 13 And Up		Teachers		Parents		School Adminis-trators		Special Services Personnel	
	*$\overline{D}$	R	*$\overline{D}$	R	*$\overline{D}$	R	*$\overline{D}$	R	*$\overline{D}$	R	*$\overline{D}$	R	*$\overline{D}$	R	*$\overline{D}$	R
Math	0.280	(1)	0.417	(1)	0.631	(4)	0.632	(2)	0.616	(4)	0.822	(8)	0.667	(7)	0.702	(8)
Language Arts	0.395	(3)	0.444	(3)	0.694	(7)	0.825	(9)	0.783	(9)	0.892	(10)	0.703	(9)	0.754	(9)
Social Studies	0.537	(10)	0.675	(10)	0.827	(10)	0.861	(10)	0.855	(10)	0.872	(9)	0.692	(8)	0.776	(10)
Science	0.367	(2)	0.471	(6)	0.656	(5)	0.679	(3)	0.757	(8)	0.801	(7)	0.810	(10)	0.658	(7)
Arts	0.568	(11)	0.450	(4)	0.620	(2)	0.714	(6)	0.614	(3)	0.481	(1)	0.444	(3)	0.529	(2)
Music	0.419	(6)	0.418	(2)	0.690	(6)	0.732	(7)	0.602	(2)	0.602	(3)	0.286	(1)	0.620	(4)
Vocational Ed.	0.527	(9)	0.773	(11)	0.999	(11)	1.137	(11)	1.039	(11)	1.078	(11)	1.190	(11)	0.893	(11)
Home Economics	0.457	(8)	0.614	(9)	0.782	(9)	0.703	(5)	0.717	(6)	0.639	(4)	0.405	(2)	0.639	(5)
Foreign Language	0.411	(5)	0.450	(5)	0.630	(3)	0.811	(8)	0.663	(5)	0.703	(6)	0.619	(6)	0.650	(6)
Health Ed.	0.404	(4)	0.587	(8)	0.772	(8)	0.686	(4)	0.720	(7)	0.639	(5)	0.452	(4)	0.548	(3)
Physical Ed.	0.428	(7)	0.509	(8)	0.569	(1)	0.554	(1)	0.538	(1)	0.481	(2)	0.619	(5)	0.401	(1)
$\overline{\overline{D}}$	0.436		0.528		0.715		0.758		0.719		0.728		0.626		0.652	
s.d.	0.0792		0.113		0.117		0.146		0.134		0.175		0.232		0.127	
N	368		608		708		158		95		121		14		129	

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*$\overline{D}$ = Average discrepancy
R = Rank order of discrepancy; high rank = most important need

DHK/meb
9/8/67

NORTH BAY PACE CENTER
April 17, 1967

APPENDIX D
TABLE IIb

STUDY #1 RESULTS

Mean Discrepancies ($\bar{D}$) -- AFFECTIVE -- 11 Curriculum Areas

Gross Content	Businessmen		Males		Females		Marin County		Sonoma County		Solano County		Napa County	
	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R
Math	1.000	(8)	0.519	(4)	0.538	(2)	0.510	(2)	0.514	(1)	0.559	(5)	0.588	(3)
Language Arts	1.008	(9)	0.560	(6)	0.651	(8)	0.578	(5)	0.620	(7)	0.617	(7)	0.672	(7)
Social Studies	1.125	(10)	0.715	(10)	0.765	(10)	0.709	(10)	0.764	(10)	0.738	(10)	0.800	(10)
Science	0.917	(6)	0.539	(5)	0.603	(3)	0.592	(7)	0.571	(5)	0.516	(4)	0.619	(5)
Arts	0.389	(1)	0.479	(2)	0.625	(4)	0.588	(6)	0.566	(4)	0.437	(2)	0.640	(6)
Music	0.437	(2)	0.471	(1)	0.630	(6)	0.550	(3)	0.598	(6)	0.507	(3)	0.560	(2)
Vocational Ed.	1.208	(11)	0.834	(11)	0.904	(11)	0.847	(11)	0.921	(11)	0.814	(11)	0.909	(11)
Home Economics	0.857	(5)	0.597	(8)	0.707	(9)	0.606	(9)	0.692	(9)	0.631	(8)	0.757	(9)
Foreign Language	0.625	(3.5)	0.486	(3)	0.627	(5)	0.595	(8)	0.521	(2)	0.600	(6)	0.517	(1)
Health Education	0.917	(7)	0.634	(9)	0.631	(7)	0.569	(4)	0.659	(8)	0.635	(9)	0.744	(8)
Physical Ed.	0.625	(3.5)	0.568	(7)	0.467	(1)	0.509	(1)	0.543	(3)	0.422	(1)	0.596	(4)
$\bar{\bar{D}}$	0.828		0.582		0.650		0.605		0.633		0.589		0.673	
s.d.	0.259		0.106		0.109		0.0921		0.116		0.114		0.112	
N	8		1017		1190		819		688		445		268	

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*$\bar{D}$ = Average discrepancy
R = Rank order of discrepancy; high rank = most important need

DHK/meb
9/8/67

NORTH BAY PACE CENTER
April 17, 1967

APPENDIX D
TABLE IIb

STUDY #1 RESULTS

Mean Discrepancies ($\bar{D}$) -- AFFECTIVE -- 11 Curriculum Areas

Gross Content	All Public Schools		All Nonpublic Sectarian Schools		All Nonpublic Nonsectarian Schools		Farm		Nonfarm		Central City		Noncentral City		Other Urban	
	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R
Math	0.540	(4)	0.476	(1)	0.632	(3)	0.600	(4)	0.470	(2)	0.704	(8)	0.509	(1)	0.520	(4)
Language Arts	0.607	(7)	0.610	(4)	0.743	(5)	0.683	(7)	0.559	(6)	0.725	(9)	0.604	(7.5)	0.586	(7)
Social Studies	0.731	(10)	0.789	(10)	0.929	(10)	0.870	(11)	0.603	(9)	0.752	(10)	0.729	(10)	0.780	(10)
Science	0.566	(6)	0.600	(3)	0.800	(7)	0.618	(6)	0.502	(3)	0.588	(4)	0.594	(6)	0.543	(6)
Arts	0.522	(2)	0.748	(9)	0.691	(4)	0.504	(1)	0.798	(11)	0.545	(2)	0.604	(7.5)	0.469	(1)
Music	0.523	(3)	0.729	(7)	0.750	(6)	0.517	(2)	0.592	(8)	0.630	(6)	0.592	(4)	0.496	(2)
Vocational Ed.	0.844	(11)	1.008	(11)	0.965	(11)	0.857	(10)	0.720	(10)	0.903	(11)	0.882	(11)	0.876	(11)
Home Economics	0.638	(9)	0.740	(8)	0.877	(9)	0.760	(9)	0.542	(5)	0.612	(5)	0.635	(9)	0.692	(8)
Foreign Lang.	0.542	(5)	0.669	(6)	0.579	(2)	0.594	(3)	0.506	(4)	0.667	(7)	0.587	(3)	0.513	(3)
Health Education	0.629	(8)	0.636	(5)	0.817	(8)	0.691	(8)	0.563	(7)	0.579	(3)	0.593	(5)	0.694	(9)
Physical Ed.	0.503	(1)	0.569	(2)	0.533	(1)	0.606	(5)	0.437	(1)	0.379	(1)	0.514	(2)	0.529	(5)
$\bar{\bar{D}}$	0.604		0.689		0.756		0.664		0.572		0.644		0.622		0.609	
s.d.	0.0992		0.134		0.133											
N	1841		346		20		152		100		148		1067		738	

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*$\bar{D}$ = Average discrepancy
R = Rank order of discrepancy; high rank = most important need.

DHK/meb
8/9/67

APPENDIX E

TABLES IIa AND IIb (CONTINUED)

Mean Discrepancy Scores ($\bar{D}$) for the COGNITIVE and AFFECTIVE Domains in 11 Curriculum Areas with Respect to the Kind of Job the Schools are Doing.

NORTH BAY PACE CENTER
April 28, 1967

APPENDIX E

STUDY #1 RESULTS

Mean Discrepancies ($\overline{D}$) -- Cognitive and Affective -- 11 Curriculum Areas

Attitude re What Kind of Job the Schools are Doing

	Table IIa (Cont.) Cognitive								Table IIb (Cont.) Affective							
Gross Content	Very Good		Good		Poor		Very Poor		Very Good		Good		Poor		Very Poor	
	*$\overline{D}$	R	*$\overline{D}$	R	*$\overline{D}$	R	*$\overline{D}$	R	*$\overline{D}$	R	*$\overline{D}$	R	*$\overline{D}$	R	*$\overline{D}$	R
Math	0.300	(1)	0.466	(4)	0.586	(4)	0.520	(3)	0.311	(1)	0.515	(1)	0.704	(2)	0.574	(3)
Language Arts	0.344	(3)	0.481	(5)	0.641	(5)	0.544	(4)	0.403	(3)	0.581	(7)	0.812	(9)	0.678	(4)
Social Studies	0.559	(9)	0.636	(9)	0.765	(8)	0.758	(8)	0.576	(10)	0.727	(10)	0.888	(10)	1.130	(11)
Science	0.477	(8)	0.582	(7)	0.862	(10)	0.820	(9)	0.438	(7)	0.531	(6)	0.781	(6)	0.758	(7)
Arts	0.423	(6)	0.502	(6)	0.693	(6)	0.707	(7)	0.456	(8)	0.523	(4)	0.730	(3)	0.740	(6)
Music	0.374	(5)	0.389	(1)	0.557	(3)	0.661	(6)	0.432	(6)	0.521	(3)	0.735	(4)	0.797	(9)
Vocational Ed.	0.622	(11)	0.743	(11)	0.908	(11)	0.943	(11)	0.588	(11)	0.841	(11)	1.125	(11)	1.000	(10)
Home Economics	0.610	(10)	0.698	(10)	0.783	(9)	0.868	(10)	0.533	(9)	0.634	(9)	0.797	(8)	0.763	(8)
Foreign Lang.	0.314	(2)	0.402	(2)	0.535	(2)	0.511	(2)	0.419	(4)	0.530	(5)	0.770	(5)	0.544	(2)
Health Ed.	0.456	(7)	0.618	(8)	0.729	(7)	0.593	(5)	0.431	(5)	0.616	(8)	0.791	(7)	0.723	(5)
Physical Ed.	0.360	(4)	0.439	(3)	0.454	(1)	0.464	(1)	0.362	(2)	0.516	(2)	0.619	(1)	0.472	(1)
$\overline{\overline{D}}$	0.440		0.541		0.683		0.672		0.450		0.594		0.796		0.744	
N	219		1509		387		62		219		1509		387		62	

*$\overline{D}$ = Average Discrepancy
R = Rank order of discrepancy; high rank = most important need.

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APPENDIX F

TABLE III

Mean Discrepancy Scores ($\bar{D}$) for each level of the COGNITIVE and AFFECTIVE Domains with Respect to Respondent Groups and Other Classification of the Data.

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APPENDIX F
TABLE III

STUDY #1 RESULTS

Mean Discrepancies ($\bar{D}$) -- Cognitive and Affective -- Analysis by Taxonomic Level

COGNITIVE

Level	Grade 6		Grade 9		Grade 12		Grade 13 And Up		Teachers		Parents		School Adminis-trators		Special Services Personnel	
	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R
C1	0.328	(1)	0.393	(1)	0.555	(2)	0.567	(1)	0.567	(1)	0.548	(1)	0.454	(1)	0.510	(1)
C2	0.481	(4)	0.472	(4)	0.621	(4)	0.679	(4)	0.623	(3)	0.590	(2)	0.479	(2)	0.566	(3)
C3	0.418	(2)	0.451	(3)	0.600	(3)	0.634	(2)	0.644	(4)	0.618	(3)	0.651	(4)	0.606	(4)
C4	0.505	⑥	0.433	(2)	0.536	(1)	0.663	(3)	0.578	(2)	0.672	(4)	0.508	(3)	0.548	(2)
C5	0.488	⑤	0.540	⑥	0.759	⑥	0.834	⑥	0.827	⑥	0.813	⑥	0.723	⑤	0.727	⑥
C6	0.468	(3)	0.491	⑤	0.676	⑤	0.792	⑤	0.744	⑤	0.776	⑤	0.744	⑥	0.697	⑤
$\bar{\bar{D}}$	0.448		0.463		0.625		0.695		0.664		0.670		0.593		0.609	
N	368		608		708		158		95		121		14		129	

AFFECTIVE

	Grade 6		Grade 9		Grade 12		Grade 13 And Up		Teachers		Parents		School Adminis-trators		Special Services Personnel	
	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R
A1	0.397	(1)	0.411	(1)	0.605	(1)	0.649	(1)	0.617	(1)	0.677	(1)	0.500	(1)	0.598	(1)
A2	0.461	(3)	0.546	(2)	0.727	(3)	0.792	(3)	0.803	⑤	0.806	④	0.660	(3)	0.694	(3)
A3	0.436	(2)	0.583	④	0.779	④	0.851	④	0.785	(3)	0.842	⑤	0.773	⑤	0.740	⑤
A4	0.469	④	0.507	(3)	0.690	(2)	0.756	(2)	0.640	(2)	0.698	(2)	0.536	(2)	0.658	(2)
A5	0.489	⑤	0.610	⑤	0.799	⑤	0.888	⑤	0.798	④	0.787	(3)	0.702	④	0.703	④
$\bar{\bar{D}}$	0.450		0.531		0.720		0.787		0.729		0.762		0.634		0.679	
N	368		608		708		158		95		121		14		129	

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*$\bar{D}$ = Average discrepancy
R = Rank order of discrepancy; high rank = most important item

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APPENDIX F
TABLE III

STUDY #1 RESULTS

Mean Discrepancies ($\bar{D}$) -- Cognitive and Affective -- Analysis by Taxonomic Level

COGNITIVE

Level	Males		Females		Marin County		Sonoma County		Solano County		Napa County		All Public Schools		All Non-public Sectarian Schools	
	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R
C1	0.459	(1)	0.482	(1)	0.431	(1)	0.494	(1)	0.476	(1)	0.539	(1)	0.464	(1)	0.507	(1)
C2	0.531	(4)	0.582	(4)	0.539	(4)	0.577	(4)	0.525	(4)	0.621	(4)	0.545	(4)	0.619	(3)
C3	0.524	(3)	0.548	(3)	0.526	(2)	0.548	(3)	0.523	(3)	0.562	(2)	0.525	(3)	0.579	(2)
C4	0.493	(2)	0.547	(2)	0.527	(3)	0.513	(2)	0.505	(2)	0.563	(3)	0.518	(2)	0.547	⑤
C5	0.615	⑥	0.704	⑥	0.650	⑥	0.677	⑥	0.649	⑥	0.696	⑥	0.644	⑥	0.747	⑥
C6	0.572	⑤	0.644	⑤	0.601	⑤	0.622	⑤	0.599	⑤	0.638	⑤	0.602	⑤	0.654	(4)
$\bar{\bar{D}}$	0.532		0.585		0.546		0.572		0.546		0.603		0.550		0.609	
N	1017		1190		819		688		445		268		1841		346	

AFFECTIVE

Level	Males		Females		Marin County		Sonoma County		Solano County		Napa County		All Public Schools		All Non-public Sectarian Schools	
	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R
A1	0.485	(1)	0.561	(1)	0.520	(1)	0.541	(1)	0.485	(1)	0.580	(1)	0.522	(1)	0.546	(1)
A2	0.595	(3)	0.687	(3)	0.637	(3)	0.639	(3)	0.623	(3)	0.718	(3)	0.631	(3)	0.705	(3)
A3	0.639	④	0.713	④	0.654	④	0.691	④	0.676	⑤	0.730	④	0.666	④	0.740	④
A4	0.573	(2)	0.632	(2)	0.589	(2)	0.618	(2)	0.589	(2)	0.649	(2)	0.591	(2)	0.678	(2)
A5	0.657	⑤	0.733	⑤	0.677	⑤	0.727	⑤	0.655	④	0.760	⑤	0.675	⑤	0.805	⑤
$\bar{\bar{D}}$	0.590		0.665		0.615		0.643		0.606		0.687		0.617		0.695	
N	1017		1190		819		688		445		268		1841		346	

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*$\bar{D}$ = Average discrepancy
R = Rank order of discrepancy; high rank = most important need

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APPENDIX F
TABLE III

STUDY #1 RESULTS

Mean Discrepancies ($\bar{D}$) -- Cognitive and Affective -- Analysis by Taxonomic Level

COGNITIVE

Level	Farm		Non-Farm		Central City		Non-Central City		Other Urban		Very Good Job		Good Job		Poor Job		Very Poor Job	
	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R
C1	0.552	(2)	0.427	(1)	0.517	(1)	0.455	(1)	0.479	(1)	0.331	(1)	0.452	(1)	0.612	(1)	0.614	(2)
C2	0.611	(4)	0.614	⑥	0.557	(3)	0.557	(4)	0.540	(4)	0.453	(3)	0.541	(4)	0.662	(4)	0.702	(4)
C3	0.568	(3)	0.455	(2)	0.570	(4)	0.547	(3)	0.520	(3)	0.444	(2)	0.515	(3)	0.660	(3)	0.651	(3)
C4	0.550	(1)	0.537	(3)	0.544	(2)	0.533	(2)	0.496	(2)	0.455	(4)	0.502	(2)	0.636	(2)	0.590	(1)
C5	0.664	⑥	0.584	⑤	0.703	⑥	0.671	⑥	0.657	⑥	0.499	⑥	0.644	⑥	0.813	⑥	0.760	⑥
C6	0.624	⑤	0.553	(4)	0.676	⑤	0.620	⑤	0.592	⑤	0.459	⑤	0.594	⑤	0.752	⑤	0.724	⑤
$\bar{\bar{D}}$	0.595		0.528		0.594		0.564		0.547		0.440		0.541		0.689		0.680	
N	152		110		148		1067		738		219		1509		387		62	

AFFECTIVE

Level	Farm		Non-Farm		Central City		Non-Central City		Other Urban		Very Good Job		Good Job		Poor Job		Very Poor Job	
	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R	*$\bar{D}$	R
A1	0.532	(1)	0.488	(1)	0.585	(1)	0.530	(1)	0.515	(1)	0.372	(1)	0.506	(1)	0.692	(1)	0.574	(1)
A2	0.690	(3)	0.615	(3)	0.678	(3)	0.654	(3)	0.620	(3)	0.479	④	0.617	(3)	0.827	(3)	0.714	(2)
A3	0.728	⑤	0.616	④	0.712	④	0.676	④	0.678	④	0.466	(3)	0.656	④	0.875	④	0.732	(3)
A4	0.674	(2)	0.604	(2)	0.646	(2)	0.605	(2)	0.583	(2)	0.442	(2)	0.581	(2)	0.770	(2)	0.741	④
A5	0.692	④	0.662	⑤	0.713	⑤	0.706	⑤	0.688	⑤	0.509	⑤	0.666	⑤	0.909	⑤	0.857	⑤
$\bar{\bar{D}}$	0.663		0.597		0.667		0.634		0.617		0.454		0.605		0.815		0.724	
N	152		110		148		1067		738		219		1509		387		62	

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*$\bar{D}$ = Average Discrepancy
R = Rank order of discrepancy; high rank = most important need

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APPENDIX G

Description of Bloom's Taxonomy of Educational Objectives

APPENDIX G

Description of Bloom's Taxonomy of Educational Objectives

Bloom's Taxonomy was prepared to provide a means for classifying types of responses specified as desirable outcomes of education. The objectives are stated in behavioral terms and placed in a logical scheme. Attention is given to definitions of categories, sample objectives and illustrative test items which would be useful in specifying objectives, planning instructions, planning evaluation, and doing research.

Each of the Learning Goals on the opinionnaire is related to the Taxonomy of Educational Objectives and includes both the Cognitive and Affective domains. An attempt was made to directly key the Learning Goals to the six levels of the Cognitive domain and to the five levels of the Affective domain. This proved to be a difficult task since it is frequently hard to separate the purely intellectual from the essentially emotional components of Learning Goals.

The Affective and Cognitive levels of the Taxonomy are summarized below:

-COGNITIVE DOMAIN-

Organizing Principle: Categories arranged according to level of complexity with each category dependent on preceding one(s); permit classification of all types of objectives; neutral in the sense that all types can be included ranging from indoctrination to free and open inquiry.

Categories

I. Knowledge: Specific terms and facts, conventions, trends, classification and categories, criteria, methodologies, principles and generalizations, theories and structure; deals primarily with memory and recall.
Example: Knows economic factors contributing to increasing interdependence of world's people.

II. Comprehension: Translation from one level of abstraction to another, from one symbolic form to another, from one verbal form to another; interpretation by relating parts, reordering ideas, making qualifications, and reorganizing essentials; extrapolation by extension to past and future situations.
Example: Expresses metaphors and other non-literal statements in own words. Differentiates facts and opinions, value judgments and predicted outcomes.

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III. Application: Terms and concepts, generalizations, laws, models criteria.
Example: Uses concepts of civil liberties in discussion of intergroup problems.

IV. Analysis: Elements, relationships, organizational principles.
Example: Identifies assumptions; detects logical fallacies; recognizes bias.

V. Synthesis: Unique communication, a plan or set of operations, a set of abstract relations.
Example: Formulates hypotheses or questions based on analysis of related factors.

VI. Evaluation: Judgments in terms of internal evidence, judgments in terms of external criteria.
Example: Formulates and uses criteria to assess validity of propositions.

-AFFECTIVE DOMAIN-

Organizing Principle: Categories arranged in hierarchical order in terms of degree of psychological internalization as part of the socialization process.

Categories

I. Receiving (Attending): Awareness, willingness to receive, controlled attention.
Example: Notices examples of incidents involving respect for freedom of speech.

II. Responding: Acquiescence in responding (compliance), willingness to respond, satisfaction in responding.
Example: Searches for material on freedom of speech; debates issues with others.

III. Valuing: Acceptance of a value, preference of a value, commitment (conviction).
Example: Encourages freedom of expression; practices and defends freedom of speech.

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IV. Organization: Conceptualization of a value, organization of a value system.
Example: Defends assumptions underlying freedom of speech.

V. Characterization by a Value or Value Complex: Generalized set, characterization.
Example: Makes and revises judgments on the basis of principles inherent in a consistent philosophy of life.

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[1] Bloom, Benjamin S. (Ed.) *Taxonomy of Educational Objectives*, Handbook I: *Cognitive Domain*. New York: David McKay, 1956.

[2] Kratwohl, David R., Benjamin S. Bloom, and Bertram B. Masia. *Taxonomy of Educational Objectives*, Handbook II: *Affective Domain*. New York: David McKay, 1964.

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APPENDIX H

LEARNING GOALS QUESTIONNAIRE
(Curriculum Need Study #1)

Note: Page numbers of Questionnaire do not follow page numbers of the remainder of this report.
The next 17 pages of this Appendix should be numbered 86 through 102.

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CENTER

1834 FIRST STREET · NAPA, CALIFORNIA 94558
707 255-2883

"Projects to Advance Creativity in Education"

PENROD MOSS
Director

WHAT IS YOUR OPINION OF EDUCATIONAL GOALS IN OUR AREA?

(STUDY #1)

This questionnaire is part of a continuing effort to improve education in Napa, Solano, Marin and Sonoma Counties. The information will be used to help us:

Identify important educational needs, and

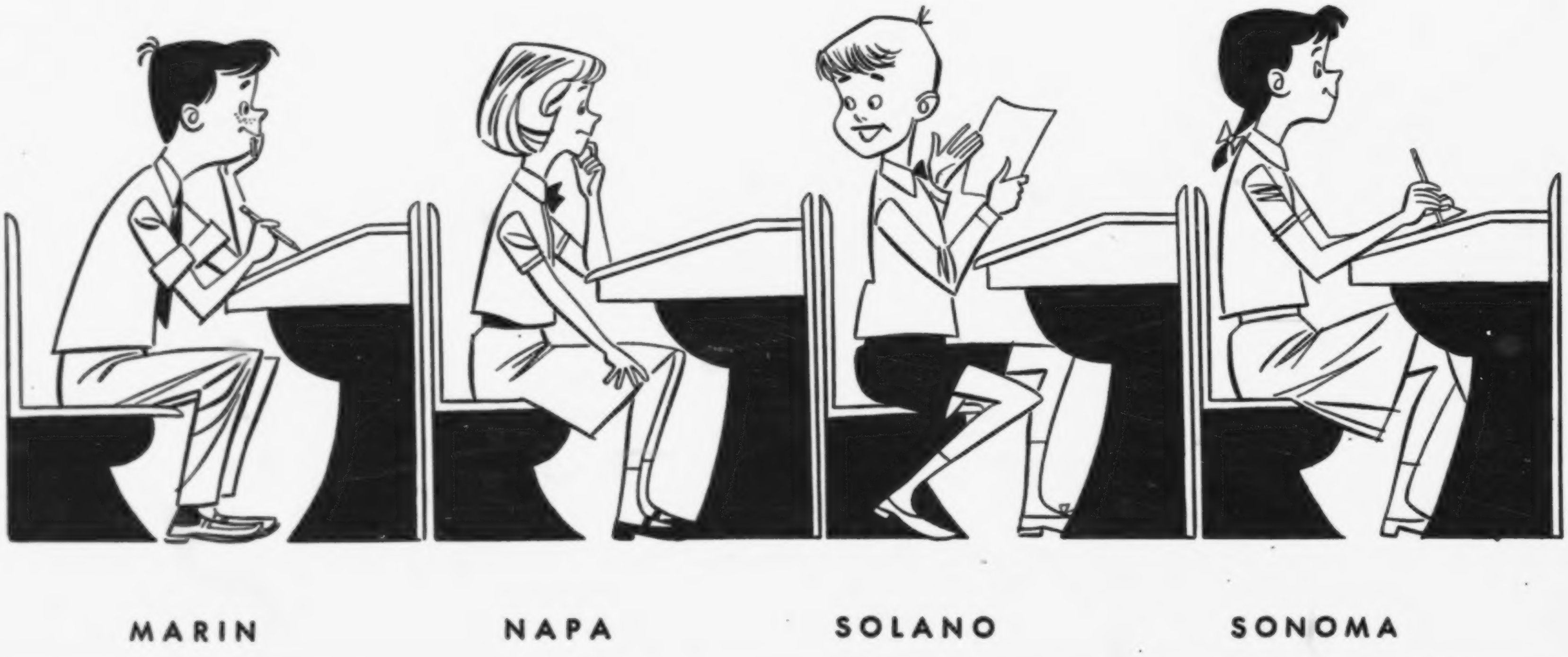
Decide some priorities for new educational programs.

Your answers will be combined with the answers of many other persons in each county. Therefore, please do not sign your name.

Please answer each question so that your opinion can be given its full value.

We look forward to sharing the results of this study with you.

Thank you for participating.



WHAT IS YOUR OPINION OF EDUCATIONAL GOALS IN OUR AREA?

(Study #1)

GENERAL INFORMATION

		CODE
S or A #	________	2 - 5
County	________	6
District	________	7 - 8
School	________	9-11
School Type	________	12
R Type	________	13
Years of Education Completed	________	14-15
Age (nearest birthday)	________	16-17
Sex	________	18
SEL	________	19
GEO	________	20
GROUP	________	21
# Children who have not started school	________	22
# Children in school	________	23
# Children in college	________	24
# Children no longer in school	________	25
Ethnic	________	26
Are our schools generally doing:	________	27

1. A very good job
2. A good job
3. A poor job
4. A very poor job

#A________

WHAT IS YOUR OPINION ABOUT EDUCATIONAL GOALS IN OUR AREA?
(STUDY #1)

DIRECTIONS

In Column I below are many kinds of learning goals for students.

In Column II please check how much you think schools NOW teach or help students learn the things in Column I.

In Column III please check how much you think schools SHOULD teach or help students learn the things in Column I.

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
1. Knowing that specific information can be found in reference books.								
2. Being able to recognize high quality in stories.								
3. Knowing there is more than one number system.								
4. Being able to select a book based on good literary standards.								
5. Finding pleasure in doing work.								

COLUMN I	COLUMN II Do Schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
6. Being able to mix colors to make a new color.								
7. Being able to identify what skills are needed for a given job.								
8. Determining if tax dollars are spent wisely.								
9. Wanting to obey the laws of conservation.								
10. Having the skill to use different methods to solve problems.								
11. Wanting to explore new forms of art.								
12. Knowing the earth has physical features.								
13. Accepting the importance of law in our daily life.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
14. Being able to determine if a sentence is written correctly.								
15. Knowing about the different viewpoints of art.								
16. Being able to read simple music.								
17. Learning the relationship of diet, exercise and rest to good health.								
18. Being able to organize a family budget.								
19. Knowing why different languages are spoken.								
20. Identifying different styles in the arts.								
21. Being able to read a map.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
22. Being able to identify laws of most help to our country.								
23. Being able to judge types of music.								
24. Preparing food for a family.								
25. Knowing that people in other lands have contributed to how we live.								
26. Identifying related facts in a story.								
27. Knowing the basic rules for physical fitness.								
28. Being able to add, subtract, multiply and divide numbers.								
29. Knowing how the past has affected our way of life.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
30. Enjoying work with clay.								
31. Knowing the parts of the body.								
32. Expressing clearly one's point of view.								
33. Understanding the Constitution of the United States.								
34. Planning a good physical exercise activity.								
35. Applying number skills in solving problems of everyday life.								
36. Appreciating many styles of writing.								
37. Forming judgments about art forms.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in COLUMN I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
38. Knowing how our government is supported.								
39. Knowing the importance of English grammar.								
40. Respecting the value of good health habits.								
41. Desiring to use mathematics effectively.								
42. Applying standards or rules of design and quality in selecting things you use.								
43. Learning to identify quality in art works.								
44. Having a large speaking vocabulary.								
45. Using the scientific method in problem solving.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
46. Knowing the value of physical fitness in daily life.								
47. Understanding the use of color in art.								
48. Planning a budget for own use.								
49. Being aware of good health habits.								
50. Changing behavior from ideas learned through reading.								
51. Being able to plan or map out a trip across the country.								
52. Knowing major periods of history.								
53. Learning how to manage money.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
54. Being able to tell others about what one reads in a newspaper.								
55. Being aware of beauty in sculpture.								
56. Cooperating with the law.								
57. Identifying the things in the past that benefit our way of life.								
58. Willing to follow the rules of grammar in speaking & writing.								
59. Being aware of the variety of living things.								
60. Being able to compare different economic systems.								
61. Wanting to solve mathematical problems without help.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
62. Being able to diagram a sentence.								
63. Knowing how oceans and physical features of the earth change climate.								
64. Being able to make sound judgments about political issues.								
65. Being able to take part in sports activities for enjoyment.								
66. Using information from the past to solve problems of today.								
67. Organizing ideas and statements while speaking.								
68. Understanding a simple foreign phrase.								
69. Working with simple tools to produce a product of some kind.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III **SHOULD** schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
70. Spending money wisely.								
71. Enjoying the expression of ideas in writing.								
72. Believing the scientific method can solve problems.								
73. Being able to identify those things in art that give pleasure.								
74. Knowing the basic notes in music.								
75. Knowing when a foreign language is spoken correctly.								
76. Wanting always to speak effectively.								
77. Applying good health habits.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
78. Knowing how a law is made.								
79. Receiving enjoyment by working with paints.								
80. Using rules of grammar in writing.								
81. Wanting to follow good health habits.								
82. Being aware of good workmanship.								
83. Deciding on the best place in which to live, based on available facts.								
84. Desiring correct spelling in writing.								
85. Being able to write a simple piece of music.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
86. Being curious about anything and everything.								
87. Discovering different ways to solve mathematical problems.								
88. Knowing the importance of a good diet.								
89. Making generalizations from historical facts.								
90. Evaluating work based upon standards of a trade or profession.								
91. Identifying what one likes about a book.								
92. Enjoying the ability to speak a foreign language.								
93. Being able to determine what is a good athlete.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
94. Playing a musical score with a musical instrument.								
95. Identifying those things desired in a home.								
96. Understanding the differences in art forms; such as painting, music, etc.								
97. Choosing the best grammatical usage.								
98. Using principles of public speaking.								
99. Appreciating foreign languages.								
100. Willing to form judgments about one's own work.								
101. Being able to spell basic words.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
102. Recognizing the parts of a good speech.								
103. Enjoying the music of different cultures - past and present.								
104. Knowing good health habits.								
105. Judging when the grammar of a foreign language is correct.								
106. Developing standards of a good home.								
107. Wanting always to enjoy art.								
108. Enjoying the correct use of spelling.								
109. Being able to use root words to make new words.								

COLUMN I	COLUMN II Do schools NOW teach or help students learn the things in Column I?				COLUMN III SHOULD schools teach or help students learn the things in Column I?			
Some Student LEARNING GOALS are:	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent	To No Extent	To Some Extent	To A Great Extent	To A Very Great Extent
110. Being able to explain the rules of punctuation.								
111. Wanting to be physically fit.								
112. Desiring the ability to spell correctly.								
113. Being aware of the fine arts.								
114. Becoming familiar with different types of food.								
115. Knowing what makes writing interesting.								
116. Expressing ideas using drawing, music, painting, clay, etc.								
117. Wanting always to speak and write effectively.								

APPENDIX I

ITEM ANALYSIS OF LEARNING GOALS
FOR
CURRICULUM NEED IDENTIFICATION STUDY (STUDY #1)

Note: The next four pages of this Appendix should be numbered 104 through 107.

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CURRICULUM NEED IDENTIFICATION STUDY (STUDY #1)

ITEM ANALYSIS OF LEARNING GOALS

The percentages in the attached table were computed on an IBM 7040-7094 at the University of California Computer Center through a cooperative arrangement with the data-processing center of the Office of the Sonoma County Superintendent of Schools funded under an ESEA, Title III grant. The Berkeley STATPAK program CRTB (Cross Tab) was used. This program generates an R x C matrix and prints the N, %, $\overline{X}$, and sigma for each variable as well as chi-square and associated df for the matrix.

Each learning goal is evaluated in terms of four possible levels of current status ("To what extent do schools now teach or help students learn these goals") and four possible levels of desirable status ("To what extent should schools teach or help students learn these goals"). For each of the 117 learning goals in the questionnaire a 4 x 4 matrix was generated by CRTB, which computed the number of respondents and the associated percentages for each of the 16 cells in the table.

Each table yielded a statistically signficant chi-square with probabilities less than $P < 0.0001$. This indicates that on a question-by-question basis there is a high degree of satisfaction with the existing educational program, as defined by these 117 learning goals, although the level of this satisfaction varies somewhat from question to question. By studying the column headed "% Zero Discrepancy" one can observe the extent of complete satisfaction for each learning goal.

A "Small" discrepancy refers to a difference of one point on the four-point rating scale; a "Medium" discrepancy is two points on the scale; a "Large discrepancy is a three-point difference, the largest possible.

A separate code sheet shows a complete description of each learning goal and its taxonomic description according to Bloom's taxonomy, as well as the subject and curriculum area each goal was designed to sample.

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CURRICULUM NEED IDENTIFICATION STUDY (STUDY #1)

ITEM ANALYSIS

		More Emphasis				Less Emphasis				
Learning Goal	% Zero Discrepancy	% Small Discrepancy (More)	% Med. Discrepancy (More)	% Large Discrepancy (More)	% Total Discrepancy (More)	% Small Discrepancy (Less)	% Med. Discrepancy (Less)	% Large Discrepancy (Less)	% Total Discrepancy (Less)	Check (%)
1	47.6	36.6	8.9	0.4	45.9	5.8	0.4	0.2	6.4	99.9
2	41.2	37.5	11.3	1.3	50.1	7.2	0.9	0.2	8.3	99.6
3	52.7	29.0	5.8	0.8	35.6	10.1	1.4	0.1	11.5	99.8
4	37.1	38.3	14.5	1.3	54.1	7.0	1.1	0.4	8.5	99.7
5	25.9	37.4	23.1	9.0	69.5	3.1	0.6	0.4	4.1	99.5
6	61.4	24.5	3.6	0.9	29.0	7.8	1.3	0.3	9.4	99.8
7	25.7	46.8	20.2	4.0	71.0	2.7	0.3	0.0	3.0	99.7
8	24.2	40.9	24.3	7.2	72.4	2.8	0.3	0.2	3.3	99.9
9	30.4	42.0	18.3	5.0	65.3	3.4	0.3	0.3	4.0	99.7
10	33.9	41.2	16.3	2.6	60.1	4.5	0.9	0.1	5.5	99.5
11	40.9	37.2	12.4	4.2	53.8	4.7	0.4	0.0	5.1	99.8
12	60.5	22.9	4.7	0.6	28.2	10.0	1.1	0.0	11.1	99.8
13	34.3	39.6	17.8	3.2	60.6	4.0	0.5	0.4	4.9	99.8
14	46.0	34.5	7.5	0.6	42.6	9.3	1.3	0.4	11.0	99.6
15	44.3	37.1	9.6	2.7	49.4	5.4	0.4	0.0	5.8	99.5
16	49.7	34.3	7.6	2.3	44.2	5.0	0.9	0.1	6.0	99.9
17	41.6	38.5	11.8	2.7	53.0	4.3	0.6	0.1	5.0	99.6
18	29.3	40.3	20.3	7.1	67.7	2.5	0.3	0.1	2.9	99.9
19	43.6	38.3	10.6	3.2	52.1	3.7	0.5	0.1	4.3	100.0
20	47.9	34.8	8.9	2.9	46.6	5.5	0.1	0.0	5.6	100.1
21	47.9	36.8	8.4	2.0	47.2	4.2	0.7	0.2	5.1	100.2
22	29.5	48.9	15.6	2.5	67.0	3.0	0.2	0.2	3.4	99.9
23	49.1	35.4	8.6	1.9	45.9	4.7	0.5	0.0	5.2	100.2
24	47.6	35.0	10.3	2.9	48.2	3.4	0.6	0.2	4.2	100.0
25	49.1	34.8	8.9	1.6	45.3	4.7	0.7	0.1	5.5	99.9
26	50.7	33.4	5.7	0.5	40.6	8.4	1.0	0.0	9.4	100.7
27	59.0	22.3	3.9	0.9	27.1	9.3	4.1	0.5	13.9	100.0
28	61.8	24.6	5.9	0.6	31.1	5.2	1.3	0.4	6.7	99.6
29	48.4	31.7	9.5	1.8	43.0	7.1	1.2	0.2	8.5	99.9
30	59.0	27.3	4.0	2.4	33.7	6.2	0.7	0.1	7.0	99.7
31	48.9	36.3	8.8	1.3	46.4	4.0	0.6	0.1	4.7	100.0
32	26.1	40.9	25.0	5.0	70.9	2.4	0.4	0.1	2.9	99.9
33	38.8	38.1	15.7	2.5	56.3	4.0	0.4	0.1	4.5	99.6
34	46.8	34.0	9.8	2.1	45.9	5.7	1.4	0.2	7.3	100.0
35	40.3	39.0	12.2	3.0	54.2	4.7	0.5	0.0	5.2	99.7
36	43.4	37.6	10.5	2.3	50.4	5.2	0.8	0.2	6.2	100.0
37	46.5	34.4	9.3	3.5	47.2	5.6	0.4	0.0	6.0	99.7
38	35.3	44.6	14.3	1.7	60.6	3.8	0.1	0.0	3.9	99.8

CURRICULUM NEED IDENTIFICATION STUDY (STUDY #1)

ITEM ANALYSIS

		More Emphasis				Less Emphasis				
Learning Goal	% Zero Discrepancy	% Small Discrepancy (More)	% Med. Discrepancy (More)	% Large Discrepancy (More)	% Total Discrepancy (More)	% Small Discrepancy (Less)	% Med. Discrepancy (Less)	% Large Discrepancy (Less)	% Total Discrepancy (Less)	Check (%)
39	44.9	33.5	9.9	1.2	44.6	8.0	1.9	0.4	10.3	99.8
40	38.8	42.1	12.4	1.7	56.2	4.1	0.5	0.1	4.7	99.7
41	40.6	39.1	11.8	2.0	52.9	5.1	0.8	0.1	6.0	99.5
42	37.2	41.6	13.1	3.4	58.1	3.9	0.6	0.1	4.6	99.9
43	45.4	35.5	10.4	3.1	49.0	5.1	0.4	0.0	5.6	100.0
44	32.9	37.4	20.4	3.3	61.1	4.5	1.0	0.1	5.6	99.6
45	40.5	37.3	12.1	2.4	51.8	6.1	1.0	0.3	7.4	99.7
46	42.4	39.3	10.4	1.9	51.6	4.9	1.0	0.2	6.1	100.1
47	54.1	32.0	5.9	1.8	39.7	5.3	0.6	0.0	5.9	99.7
48	31.3	42.1	17.5	5.9	65.5	2.5	0.4	0.0	2.9	99.7
49	41.0	41.4	11.3	1.6	54.3	4.1	0.4	0.0	4.5	99.8
50	40.0	39.7	12.3	2.2	54.2	4.6	0.6	0.1	5.3	99.5
51	40.4	41.3	11.6	3.3	56.2	2.6	0.5	0.1	3.2	99.8
52	52.0	29.9	5.9	0.7	36.5	8.8	2.0	0.5	11.3	99.8
53	27.4	38.8	22.6	8.2	69.6	1.9	0.4	0.2	2.5	99.5
54	42.2	41.5	9.7	1.8	53.0	4.4	0.4	0.1	4.9	100.1
55	43.4	39.0	10.3	3.4	52.7	3.6	0.2	0.0	3.8	99.9
56	36.1	40.5	15.2	3.2	58.9	3.4	1.0	0.3	4.7	99.7
57	45.3	37.8	9.0	1.3	48.1	5.8	0.7	0.2	6.7	100.1
58	45.6	33.8	9.6	1.4	44.8	7.5	1.3	0.3	9.1	99.5
59	50.3	32.8	9.1	1.3	43.2	5.9	0.5	0.1	6.5	100.0
60	37.3	41.1	13.3	2.7	57.1	4.6	0.3	0.3	5.2	99.6
61	36.9	39.7	12.7	3.8	56.2	4.9	1.2	0.5	6.6	99.7
62	47.4	23.4	5.7	1.0	30.1	17.5	4.1	0.5	22.1	99.6
63	56.8	30.4	4.5	0.6	35.5	6.9	0.5	0.1	7.5	99.8
64	27.2	40.8	22.0	5.8	68.6	3.4	0.3	0.0	3.7	99.5
65	51.6	30.5	7.5	1.4	39.4	6.4	1.8	0.3	8.5	99.5
66	39.1	40.6	12.8	2.9	56.3	3.8	0.6	0.1	4.5	99.9
67	30.1	40.2	21.4	4.1	65.7	3.4	0.6	0.0	4.0	99.8
68	48.2	33.6	8.5	1.6	43.7	6.6	1.0	0.3	7.9	99.8
69	44.4	37.4	10.9	2.4	50.7	3.8	0.5	0.3	4.6	99.7
70	24.2	43.8	21.3	8.1	73.2	2.2	0.3	0.0	2.5	99.9
71	40.7	40.3	11.2	2.1	53.6	4.6	0.8	0.1	5.5	99.8
72	49.1	34.5	7.0	1.0	42.5	7.0	1.2	0.1	8.3	99.9
73	46.4	33.6	10.3	3.0	47.5	5.2	0.6	0.1	5.9	99.8
74	53.5	29.6	6.9	2.1	38.6	6.8	0.9	0.1	7.8	99.9
75	48.0	33.7	7.4	1.8	44.1	7.2	1.2	0.1	8.5	100.6
76	36.0	40.1	16.4	2.7	59.2	3.6	0.7	0.1	4.4	99.6
77	41.7	38.9	12.6	2.3	53.8	3.4	0.9	0.1	4.4	99.9
78	41.8	40.7	10.6	1.9	53.2	4.3	0.4	0.0	4.7	99.7
79	55.1	30.2	6.5	1.8	38.5	5.5	0.8	0.0	6.3	99.9
80	50.0	31.5	7.0	1.0	39.5	8.4	1.6	0.3	10.3	99.8

CURRICULUM NEED IDENTIFICATION STUDY (STUDY #1)

ITEM ANALYSIS

		More Emphasis				Less Emphasis				
Learning Goal	% Zero Discrepancy	% Small Discrepancy (More)	% Med. Discrepancy (More)	% Large Discrepancy (More)	% Total Discrepancy (More)	% Small Discrepancy (Less)	% Med. Discrepancy (Less)	% Large Discrepancy (Less)	% Total Discrepancy (Less)	Check (%)
81	44.2	38.4	10.4	1.8	50.6	4.1	0.7	0.2	5.0	99.8
82	39.2	40.1	14.2	3.0	57.3	3.1	0.4	0.0	3.5	100.0
83	35.8	37.9	17.2	5.0	60.1	3.5	0.4	0.2	4.1	100.0
84	45.8	33.7	10.8	1.6	46.1	6.2	1.7	0.2	8.1	100.0
85	48.3	35.4	6.8	3.1	45.3	5.2	0.7	0.4	6.3	99.9
86	35.6	37.9	17.4	4.8	60.1	3.7	0.5	0.0	4.2	99.9
87	45.7	36.0	8.4	1.0	45.4	7.4	1.0	0.2	8.6	99.7
88	42.7	39.3	10.6	2.2	52.1	4.5	0.4	0.1	5.0	99.8
89	50.0	33.5	6.1	1.4	41.0	7.2	1.4	0.4	9.0	100.0
90	38.3	42.1	12.8	2.8	57.7	3.2	0.5	0.2	3.9	99.9
91	47.4	34.3	8.4	1.0	43.7	7.6	1.0	0.1	8.7	99.8
92	45.3	32.4	11.3	3.1	46.8	6.5	0.9	0.4	7.8	99.9
93	52.8	27.2	6.8	1.9	35.9	8.6	1.8	0.8	11.2	99.9
94	57.5	28.8	5.1	1.5	35.4	6.3	0.6	0.3	7.2	100.1
95	48.6	34.1	10.0	2.9	47.0	4.1	0.3	0.1	4.5	100.1
96	49.7	32.8	9.0	2.5	44.3	5.3	0.7	0.0	6.0	100.0
97	46.9	33.9	8.4	1.3	43.6	7.9	1.4	0.2	9.5	100.0
98	38.4	40.0	13.4	2.6	56.0	4.6	0.6	0.4	5.6	100.0
99	46.3	32.7	10.0	2.5	45.2	6.7	1.1	0.5	8.3	99.8
100	34.7	41.2	16.2	4.3	61.7	3.2	0.4	0.1	3.7	100.1
101	49.7	32.1	10.0	1.3	43.3	5.6	1.0	0.3	6.9	99.9
102	42.3	39.2	9.5	1.7	50.4	6.6	0.5	0.1	7.2	99.9
103	45.6	35.3	10.0	3.4	48.7	5.1	0.4	0.2	5.7	100.0
104	48.0	34.9	10.4	1.6	46.9	4.1	0.7	0.2	5.0	99.9
105	52.9	30.2	6.4	1.3	37.9	7.6	1.1	0.4	9.1	99.9
106	37.6	38.6	14.6	4.9	58.1	3.4	0.6	0.2	4.2	99.9
107	48.2	33.1	9.1	3.5	45.7	5.2	0.7	0.1	6.0	99.9
108	46.3	33.4	11.3	1.7	46.4	5.8	1.2	0.3	7.3	100.0
109	46.4	33.7	10.4	2.2	46.3	6.2	0.8	0.3	7.3	100.0
110	48.4	31.7	6.8	1.4	39.9	9.8	1.5	0.4	11.7	100.0
111	44.0	34.6	11.6	2.6	48.8	5.4	1.4	0.3	7.1	99.9
112	45.8	36.6	10.6	1.3	48.5	4.6	0.8	0.3	5.5	99.8
113	47.2	31.2	11.4	4.0	46.6	5.3	0.6	0.2	6.1	99.9
114	50.7	33.3	8.7	2.7	44.7	3.8	0.3	0.2	4.3	99.7
115	40.6	39.8	11.1	2.7	53.6	5.0	0.6	0.2	5.8	100.0
116	41.6	33.1	15.2	4.9	53.2	4.6	0.5	0.0	5.1	99.9
117	37.0	38.1	17.7	3.6	59.4	3.8	0.6	0.1	4.5	100.9

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